HOPE'S
Catalogue
of
Metal Windows

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API INTERNATIONAL

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Established A.D. 1818.

HENRY·HOPE & ·SONS·LTD

Head Office and Manufactory:

55 Lionel Street, Birmingham

Telegrams: "Conservatory, Birmingham." *Telephones: Central* {998 / 999} *two lines*

Head Office, Birmingham. William Haywood, Architect.

LONDON OFFICE: 59 *Berners Street, W.*

Telegrams: "Buntline, London." *Telephone:* 4291 *City.*

MANCHESTER: 21 *Spring Gardens*

Telephone: 4290 *Central.*

GLASGOW: 134 *St. Vincent Street*

Telegrams: "Casements, Glasgow." *Telephone:* 1540 *Argyle.*

ERRATA.

Manchester Telephone No. 4290 *City.*

Pages 10, 11 and 14: For the word "joints" on bottom line substitute "jambs."

Page 38: Sections of jambs 14 and 13 have been transposed.

THIS edition of our Catalogue illustrates various refinements upon our Standard Sections made since 1909, and contains much new material.

The quality of our work is shewn more correctly by a new method of illustration, and we have greatly condensed the descriptive matter of the book to simplify reference as much as possible.

We have recently purchased the Goodwill, Patterns, Trade Marks, Designs & Patents of Wenham & Waters Limited, and are in a position to supply casements, casement fittings, and leaded glass to any of their designs.

30th March, 1912. 55 Lionel Street, Birmingham.

All previous lists cancelled.

Index

Introductory Notes

Our Sections.

Sections 1, 2, 3, 4, 6, 7, 8 & 9 *Open Outwards* and are hung at side or top.
Sections 1a, 2a, 3a, 4a & 6a *Open Inwards* and are hung at side or bottom.
Sections 1c & 4c are *Cleaning Casements* hung on vertical pivots.

Quality.

We have three qualities representing three grades of finish. Qualities 1 & 2 are both oiled and painted two coats of white lead paint, but Quality 1 is fitted with Bronze fittings and Quality 2 with Iron fittings. Quality 1a is specially highly finished with a coat of hard setting enamel on the top of the two coats of paint, and has Bronze fittings and sill bars. This quality meets the demand for specially good work where the cost of Bronze casements is prohibitive.

The care and trouble bestowed on finishing our work, together with the exceptional quality and character of our fittings, should be noted in comparing prices with other makes.

Which Section to use.

Sections 1, 1a & 1c. For large casements in buildings of importance, where great strength and absolute exclusion of weather are a necessity.

Sections 2 & 2a. For casements of moderate size where first-class work is required.

Sections 4, 4a & 4c are a special range, every form of which, whether Outward or Inward opening, can be fixed in an ordinary outside rebate. They are stronger than Section 2, and are particularly suitable for composite windows.

Sections 6 & 6a are of the same strength and character as Section 2, but with a moulded edge for use where the casements are divided into panes with moulded bars.

Section 7 is our Patented Flat Section for first-class domestic work of moderate size. It can only be used with leaded glass. It is weather-tight and of first-rate quality in every respect.

Sections 3 & 3a. For ordinary domestic work where economy is of importance and the height of the casement does not exceed 3ft. 6in.

Section 9 (a casement without frame). For ordinary domestic work where rigid economy is necessary.

Section 8 (casement without frame). For cottage property.

Hope's Casements for domestic work, have a world-wide reputation. Our patterns range from the best weather-tight window that can be produced by fine machinery to the simplest form of cottage casement, and afford a wide selection in design and price. We have recently added an entirely new section to our list to meet the requirements of those who prefer a *Flat iron* casement for its appearance, but object to the imperfections usually associated with windows of this type. This casement, which we have called "*The Tudor*" (see page 32), is equal to the best old casements in artistic character and far surpasses them in mechanical excellence.
All our casements are easily opened and can be rigidly stayed at any distance from a quarter of an inch to the full width of the window opening. They give perfect ventilation and are proof against distortion in any climate.

Hope's Office Windows are designed to meet modern requirements, viz. :—
A maximum amount of light and ventilation; The absolute exclusion of dust and rain; And resistance to fire from without and within; Conditions which are desirable in all buildings, but which are now a necessity for Offices, Warehouses, Stores, and buildings of a similar character.
To meet this necessity we have developed a special type of window which entirely meets the conditions enumerated above and affords a wide selection in various forms of window opening (pages 44 to 53).

Metal Windows for Public Buildings
also windows for large shopping premises, and works of a monumental character, are usually of special design and provide a legitimate field for architectural enrichment. We are quite satisfied that work of this character is to have a great future in England, and we are prepared to give expert advice upon the design of such windows and to assist architects with drawings, specifications or P. C. items for any scheme of fenestration however elaborate.

Bronze Metal Casements For the highest class of work we strongly recommend the use of solid bronze; it is everlasting in wear; has a beautiful surface; and improves in colour with age.
We make all our sections in this metal and will furnish estimates of the cost and samples when desired.

Welding

We use the Oxy-Acetylene process of welding wherever it is advantageous to do so. We particularly call attention to our "spot welding" system at the intersections of the bars in our steel mitre joint sashes (see page 115).

Leaded Lights and Painted Glass

The importance of leaded glazing being manufactured in the same works and under the same supervision as the metal casements is now well recognised, and our work in this department will be found thoroughly satisfactory.

Dimensions

In sending sizes the instructions given on pages 78 and 79 should be observed. Where a large number of casements are ordered, a practical representative will be sent free of charge to take sizes, and where this is done we take all responsibility for the work being accurate. In all cases we strongly advise customers to arrange for the fixing and glazing to be done by our men. Estimates will be forwarded on application.

Guarantee

Section 1 is guaranteed weather-tight in any situation.
Sections 2, 4, 6 and 7 are weather-tight in all but the most exposed places, such as south-west aspects on high positions, or close to the sea coast.
Section 3 is weather-tight in all ordinary situations.
In all cases our guarantee is subject to the details of the heads, jambs, and sills of the window openings being approved by us.

TERMS OF PURCHASE

Cash on the 10th of the month following date of delivery.
Carriage paid on orders of £10 and upwards to any railway station within 150 miles of Birmingham; over this distance extra carriage will be charged.
Packing, where necessary, charged at cost price, value of cases allowed in full when returned in good condition carriage paid.
Special terms as to payment, etc., will be made for large contracts.

Factory Sashes.

We have enlarged & improved our Factory and Plant for this department, & we invite architects and engineers to inspect our methods of manufacture.
Our labour saving machinery enables us to supply sashes of the highest quality at prices which compare favourably with any other type of window, and we can always deliver in such time as to keep ahead of the most rapid building contract.
Many of the largest and best examples of modern factories throughout the world are fitted with Hope's Steel Sashes.

SPECIFICATION
of Manufacture of
HOPE'S CASEMENTS

Bars. Each section is of solid rolled mild steel, hydraulically straightened, and free from hammer marks or distortions of any kind.

Joints. All joints are cut on milling machines with special cutters of correct contour for each section. (This method ensures absolutely perfect joints and eliminates the risk of breakage, which is never absent from punched and hand-filed work).
Every joint after machining is rivetted, brazed and sandblasted. *Sandblasting removes the flux and scale and exposes the finished joint for inspection.*

Plates & Brackets. The handle plates and stay brackets are mild steel drop forgings accurately machined, rivetted and brazed to the casements.

Hinges. Our hinges are for the most part of mild steel forgings, turned and bored and bushed with BRONZE.
Where this type is unsuitable, we use solid bronze butts to special heavy patterns of our own manufacture.

Painting. For Qualities 1 & 2 : *Two* coats of oil paint after thorough cleaning. For Quality 1a, an additional coat of hard drying enamel.

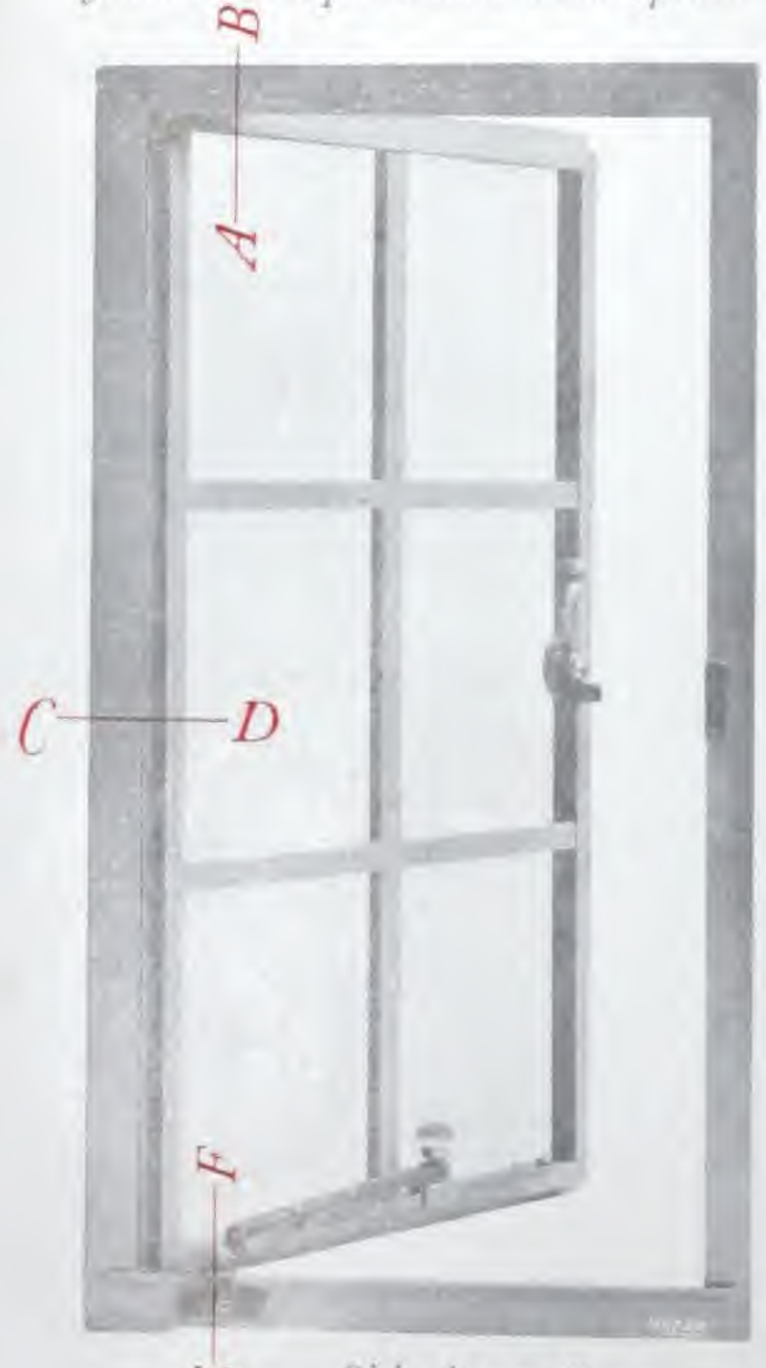
Fit & Finish. The best. Only first class well trained artisans are employed upon this work.

INSPECTION. All our casements are subjected to a rigid inspection as to size, quality and finish before despatch.

HOPE'S SECTION, 1.

Outward Opening Casement with Frame

Top hung Casement (for use above transome) Quality 1, with ⊥ bars, and fitted with Hope's Patent Cam Opener



Side hung Casement Quality 1, with ⊥ bars, and fitted with Handle 20a on Plate 890, and Stay 223.

DETAILS FULL SIZE

For full Specification of manufacture see page 7.

Price List of SECTION, 1.

NOTE—All the list prices are for casements with square heads prepared to fix in outside rebates to details on page 8, and to receive plate glass in one sheet.

CASEMENTS HUNG AT SIDE

HEIGHT by any width not exceeding 2 feet.	Quality 1.	Quality 2.	Quality 1a.	Fixed Lights to Match.		French Casements see p.p. 10 & 11 any width up to 4 feet
Not exceeding 3ft.	45/-	41/-	57/-	*For prices of L Sections see page 13*	14/-	103/-
,, ,, 3ft. 6in.	47/-	43/-	59/-		15/-	
,, ,, 4ft.	49/-	45/-	61/-		16/-	107/-
,, ,, 4ft. 6in.	51/-	47/-	64/-		17/-	117/-
,, ,, 5ft.	56/-	52/-	70/-		18/-	139/-
,, ,, 5ft. 6in.	67/-	62/-	81/-		19/-	145/-
,, ,, 6ft.	70/-	65/-	85/-		20/-	

QUALITY **1** fitted with any of Hope's Patent Two-point Bronze Handles on page 64 and Stay 223.
(If any of the Bronze Peg Stays on page 66 are substituted for Stay 223, deduct 1/- each).

QUALITY **2** fitted with any of the Iron Handles on page 65 and any of the Iron Peg Stays on page 67.

QUALITY **1a**, specially high finish, with bronze sills.

All casements over 5 feet high are fitted with Double Grip Bolts (see page 68).

CASEMENTS HUNG AT TOP

HEIGHT by any width not exceeding 2 feet.	Quality 1.	Quality 2.	Quality 1a.
Not exceeding 3ft. : :	43/-	38/-	53/-

QUALITY **1** fitted with Openers 506, 727 or 502 (see pages 70 and 71).
(If any of the Bronze Peg Stays on page 66 are substituted, deduct 1/- each).

QUALITY **2** fitted with any of the Iron Peg Stays on page 67.

QUALITY **1a**, specially high finish, with bronze sills.

EXTRAS

SPECIAL SHAPES. Circular or gothic heads, or circular on plan, 12/- each.
(For French Casements 25/- each).

BARS. Casements divided into panes with rebated bars, 9d. per pane.
Saddle bars for leaded lights, 10d. each bar.

EXTRA WIDTHS. For widths over 2 feet add 6d. per inch.
(For French Casements over 4 feet, add 1/- per inch).

ENAMELLING. For enamelling Qualities 1 & 2 one coat, in addition to the two coats of paint, add 5 per cent. to the prices.

GLAZING FILLETS. Galvanized steel fillets with brass screws for securing glass without front putty (strongly recommended for large casements glazed with plate glass), 4d. per lineal foot of fillet.

FILLETS FOR GROOVES. 4d. per lineal foot.

For instructions as to ordering see pages 78 & 79.

HOPE'S

SECTION, 1. FRENCH CASEMENT

Outward Opening Casement & Frame (With Mullion)

One pair of French Casements (with mullion) with ⊥ bars, fitted with Handle 497 on Plate 890 and Double Grip Bolt and Stay 223.

Section A-B, half full size.

For prices and extras of Section 1 French Casement see page 9; of Section 2 see page 19; of Section 4 see page 25.

Note.—The prices are for Quality 1 with Bronze fittings.
For Quality 1a add 25/- each.

For details of joints, head and sill, see page 8.

HOPE'S

SECTION, 1. FRENCH CASEMENT

Outward Opening Casement & Frame (Without Mullion)

One pair of French Casements (without mullion) with ⊥ bars, fitted with Cremorne Bolt and Stay 223.

Section A-B, half full size.

For prices and extras of Section 1 French Casement see page 9; of Section 2 see page 19; of Section 4 see page 25.

Note.—The prices are for Quality 1 with Bronze fittings.
For Quality 1a add 25/- each.

For details of joints, head and sill, see page 8.

HOPE'S SECTION, 1a.

Inward Opening Casement with Frame

Bottom hung Casement (for use above transome) Quality 1, with ⊥ bars and fitted with Spring Catch and Hope's Patent Passable Side Arms.

Side hung Casement, Quality 1, with ⊥ bars and fitted with Handle 258 and Stay 223.

DETAILS
FULL SIZE

For full Specification of manufacture see page 7.

Price List of SECTION, 1a.

NOTE—All the list prices are for casements with square heads prepared to fix in inside rebates to details on page 12, *and to receive plate glass in one sheet.*

CASEMENTS HUNG AT SIDE

HEIGHT by any width not exceeding 2 feet.	Quality 1.	Quality 2.	Quality 1a.	Fixed Lights to Match	French Casements see p.p. 14 & 15 any width up to 4 feet.
Not exceeding 3ft.	51/-	47/-	63/-	14/-	115/-
" " 3ft. 6in.	53/-	49/-	65/-	15/-	119/-
" " 4ft.	55/-	51/-	67/-	16/-	125/-
" " 4ft. 6in.	57/-	53/-	69/-	17/-	148/-
" " 5ft.	60/-	56/-	72/-	18/-	154/-
" " 5ft. 6in.	72/-	68/-	86/-	19/-	
" " 6ft.	75/-	71/-	90/-	20/-	

For prices of L Sections see page 13

QUALITY **1** fitted with any of Hope's Bronze Handles on page 64 and Stay 223.

QUALITY **2** fitted with Iron Handles to any of the patterns on page 65 and Stay 223.

QUALITY **1a**, specially high finish, with bronze sills.

All casements over 5 feet high are fitted with Double Grip Bolts (see page 68).

CASEMENTS HUNG AT BOTTOM

HEIGHT by any width not exceeding 2 feet.	Quality 1.	Quality 2.	Quality 1a.
Not exceeding 3ft. : :	43/-	39/-	53/-

QUALITY **1** fitted with Hope's Patent Passable Side Arms and Spring Catch.
(See page 71 for full details of Patent Side Arms).

QUALITY **2** fitted with fixed Iron Side Arms and Spring Catch.

QUALITY **1a**, specially high finish, with bronze sills.

EXTRAS

SPECIAL SHAPES Circular or gothic heads, 12/- ea. Circular on plan, 12/- ea.
(For French Casements, 25/- each).

BARS. Casements divided into panes with rebated bars, 9d. per pane.
Saddle bars for leaded lights, 10d. each bar.

EXTRA WIDTHS. For widths over 2 feet add 6d. per inch.
(For French Casements over 4 feet, add 1/- per inch).

ENAMELLING. For enamelling Qualities 1 & 2 one coat, in addition to the two coats of paint, add 5 per cent. to the prices.

GLAZING FILLETS. Galvanized steel fillets with brass screws for securing glass without front putty (strongly recommended for large casements glazed with plate glass), 4d. per lineal foot of fillet.

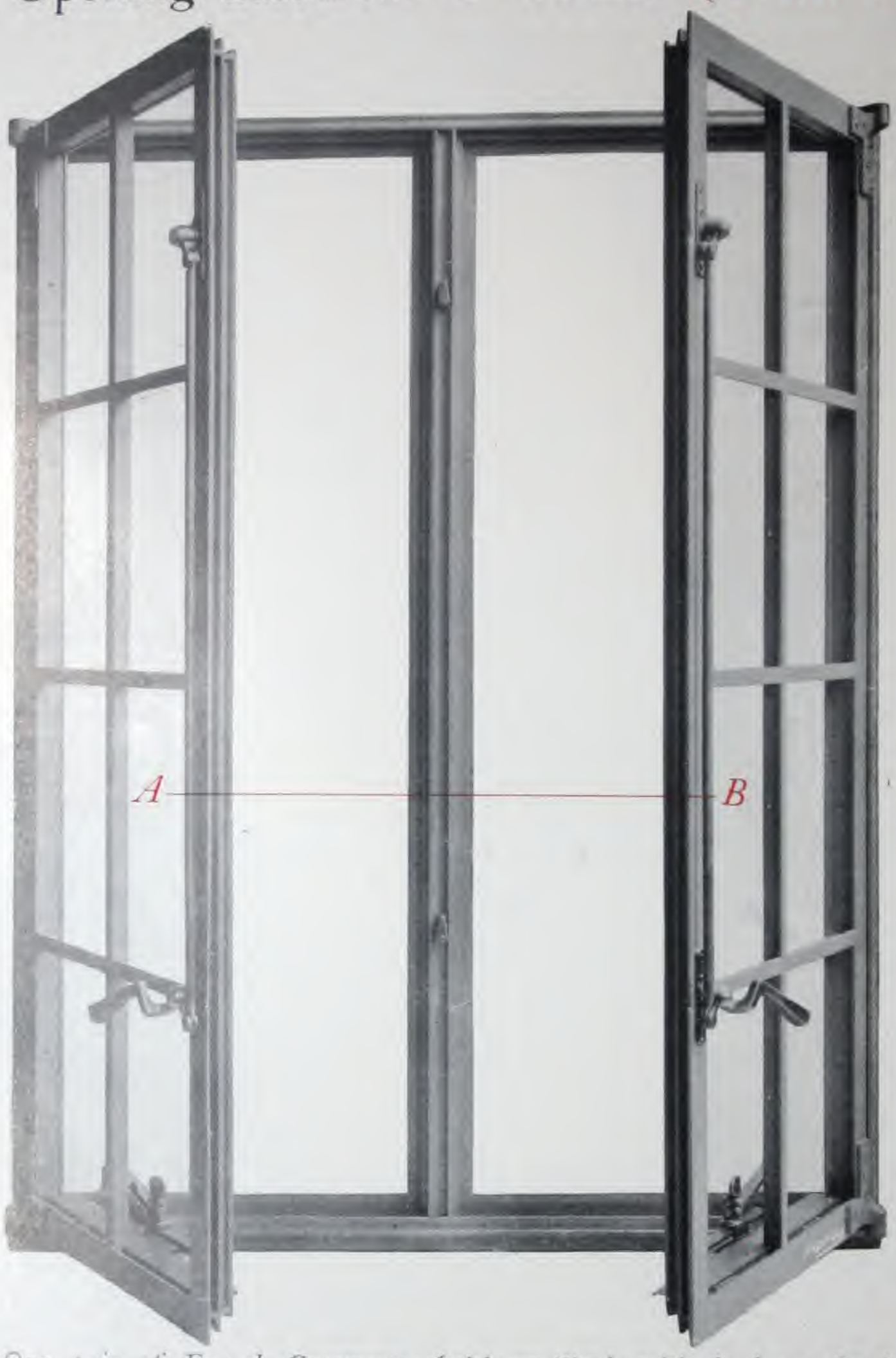
FILLETS FOR GROOVES. 4d. per lineal foot.

For instructions as to ordering see pages 78 & 79.

HOPE'S

SECTION, 1a. FRENCH CASEMENT

Inward Opening Casement & Frame (With Mullion)



One pair of French Casements (with mullion) with ⊥ bars, fitted with Handle 497 *and Double Grip Bolt and Stay* 223.

Section A-B, half full size.

For prices and extras of Section 1a French Casement see page 13; of Section 2a see page 21; of Section 4a see page 27.

Note.—The prices are for Quality 1 with Bronze fittings.

For Quality 1a add 25/- each.

For details of joints, head and sill, see page 12.

HOPE'S

SECTION, 1a. FRENCH CASEMENT

Inward Opening Casement & Frame (Without Mullion)

One pair of French Casements (without mullion) with ⊥ bars, fitted with Cremorne Bolt and Stay 223.

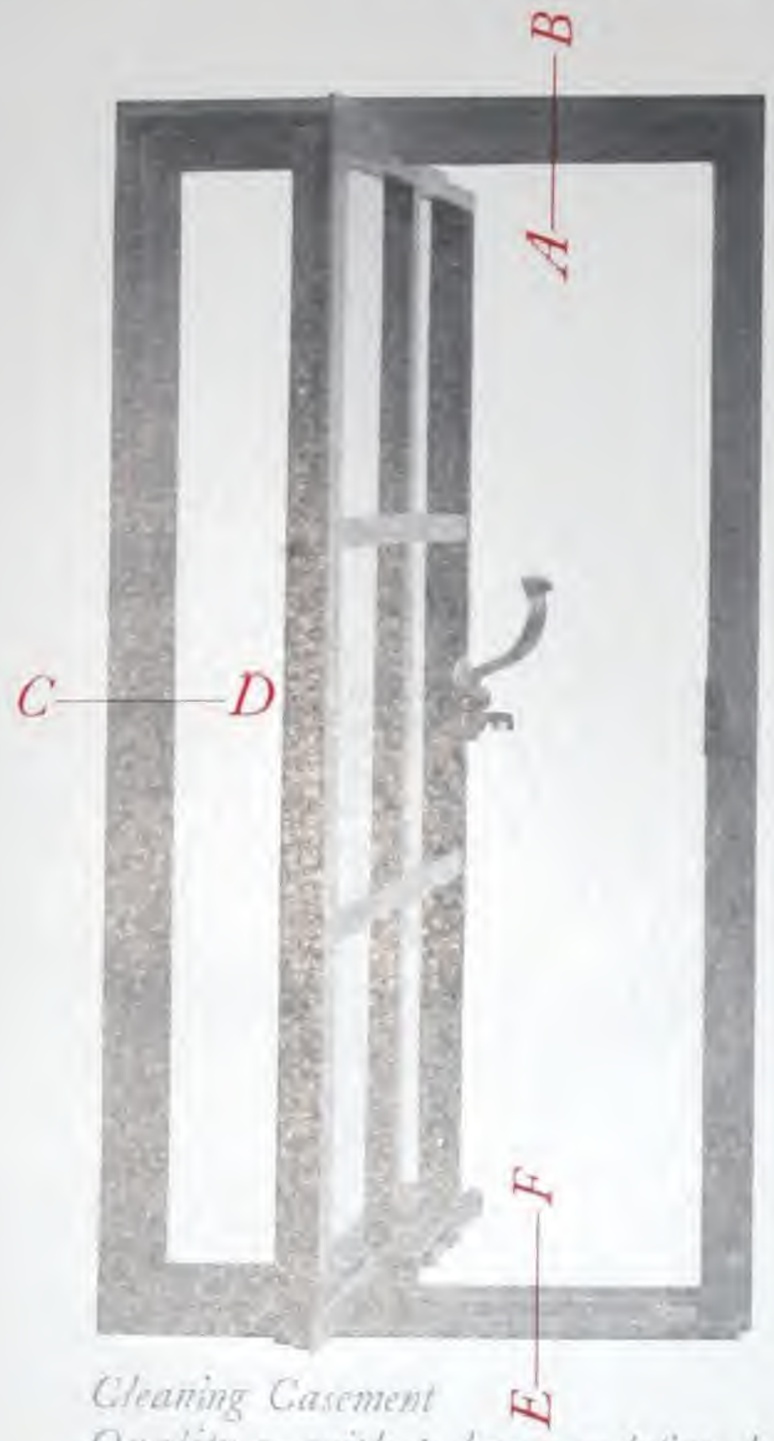
Section A-B, half full size.

For prices and extras of Section 1a French Casement see page 13; of Section 2a see page 21; of Section 4a see page 27.

NOTE.—The prices are for Quality 1 with Bronze fittings. For Quality 1a add 25/- each. INWARD opening French Casements (without mullion) may be fitted with Espagnolette bolt if preferred (see page 69).

HOPE'S SECTION, 1c.

Cleaning Casement with Frame



Cleaning Casement
Quality 1, *with* ⊥ *bars and fitted with Handle* 20a *on Plate* 890 *and Stay* 223.

NOTE.—The full section of the casement is maintained throughout and no portion is cut away.

There are *no movable parts* and no device of any kind which is liable to get out of order.

Section A—B

Section C—D

Section E—F

DETAILS FULL SIZE

For full Specification of manufacture see page 7.

Price List of SECTION, 1c.

NOTE—All the list prices are for casements with square heads prepared to fix in outside rebates to details on page 16, *and to receive plate glass in one sheet.*

CLEANING CASEMENTS

HEIGHT by any width not exceeding 3 feet.	Quality 1.	Quality 2.	Quality 1a.	Fixed Lights to Match.
Not exceeding 3ft. 6in. :	64/-	60/-	83/-	17/-
,, ,, 4ft. : :	66/-	62/-	86/-	18/-
,, ,, 4ft. 6in. :	68/-	64/-	89/-	19/-
,, ,, 5ft. : :	71/-	67/-	94/-	20/-
,, ,, 5ft. 6in. :	85/-	81/-	106/-	21/-
,, ,, 6ft. : :	89/-	85/-	110/-	22/-
,, ,, 6ft. 6in. :	94/-	90/-	113/-	24/-
,, ,, 7ft : :	99/-	95/-	117/-	26/-

For prices of L *Sections see page 43*

QUALITY 1 fitted with any of Hope's Patent Two-point Bronze Handles on page 64 and Stay 223.

(If any of the Bronze Peg Stays on page 66 are substituted for Stay 223, deduct 1/- each).

QUALITY 2 fitted with Iron Handles on page 65 and any of the Iron Peg Stays on page 67.

QUALITY 1a, specially high finish, with bronze sills.

All casements over 5 feet high are fitted with Double Grip Bolts (see page 68).

EXTRAS

SPECIAL SHAPES. Circular or gothic heads, 15/- ea. Circular on plan, 12/- ea.

(Shaped heads in Cleaning Casements are made as a fixed light above the spring line).

BARS. Casements divided into panes with rebated bars, 9d. per pane.
Saddle bars for leaded lights, 10d. each bar.

EXTRA WIDTHS. For widths over 3 feet add 6d. per inch.

ENAMELLING. For enamelling Qualities 1 & 2 one coat, in addition to the two coats of paint, add 5 per cent. to the prices.

GLAZING FILLETS. Galvanized steel fillets with brass screws for securing glass without front putty (strongly recommended for large casements glazed with plate glass), 4d. per lineal foot of fillet.

FILLETS FOR GROOVES. 4d. per lineal foot.

NOTE—This is our original pattern of cleaning casement which we introduced in 1898. *Time and experience have conclusively proved our claims for its durability and efficiency.*

One of these casements in the centre of a 3*-light window is sufficient to allow for cleaning all three panes of glass from the inside. Cleaning schemes for any building, together with drawings and estimates, will gladly be forwarded on receipt of tracings or blue prints.*

For instructions as to ordering see pages 78 *&* 79.

HOPE'S SECTION, 2.

Outward Opening Casement with Frame

Top hung Casement (for use above transome), Quality 1, glazed with leaded glass and fitted with Hope's Patent Cam Opener.

Side hung Casement, Quality 1, glazed with leaded glass and fitted with Handle 20a on Plate 208 and Stay 223.

Outside

Section A—B

Section C—D

Inside

Section E—F

DETAILS FULL SIZE

For full Specification of manufacture see page 7.

Price List of SECTION, 2.

NOTE—All the list prices are for casements with square heads prepared to fix in outside rebates to details on page 18, *and to receive plate glass in one sheet.*

CASEMENTS HUNG AT SIDE

HEIGHT by any width not exceeding 2 feet.	Quality 1.	Quality 2.	Quality 1a.	Fixed Lights to Match.	French Casements see p.p. 10 & 11 any width up to 4 feet.
Not exceeding 2ft. 6in.	33/-	29/-	42/-	10/-	75/-
,, ,, 3ft.	34/-	30/-	43/-	11/-	79/-
,, ,, 3ft. 6in.	35/-	31/-	44/-	12/-	83/-
,, ,, 4ft.	37/-	33/-	46/-	13/-	101/-
,, ,, 4ft. 6in.	39/-	35/-	49/-	14/-	105/-
,, ,, 5ft.	48/-	43/-	59/-	15/-	
,, ,, 5ft. 6in.	50/-	45/-	62/-	16/-	

For prices of L *Sections see page 13*

QUALITY **1** fitted with any of Hope's Patent Two-point Bronze Handles on page 64 and Stay 223.

(If any of the Bronze Peg Stays on page 66 are substituted for Stay 223, deduct 1/- each).

QUALITY **2** fitted with any of the Iron Handles on page 65 and any of the Iron Peg Stays on page 67.

QUALITY **1a**, specially high finish, with bronze sills.

All casements over 4 ft. 6 in. high fitted with Double Grip Bolts (see page 68).

CASEMENTS HUNG AT TOP

HEIGHT by any width not exceeding 2 feet.	Quality 1.	Quality 2.	Quality 1a.
Not exceeding 3ft. : :	32/-	29/-	40/-

QUALITY **1** fitted with Openers 506, 727 or 502 (see pages 70 and 71).

(If any of the Bronze Peg Stays on page 66 are substituted, deduct 1/- each).

QUALITY **2** fitted with any of the Iron Peg Stays on page 67.

QUALITY **1a**, specially high finish, with bronze sills.

EXTRAS

SPECIAL SHAPES. Circular or gothic heads, or circular on plan, 10/- each.

(For French Casements, 20/- each.)

BARS. Casements divided into panes with rebated bars, 9d. per pane.

Saddle bars for leaded lights, 10d. each bar.

EXTRA WIDTHS. For widths over 2 feet add 4d. per inch.

(For French Casements over 4 feet add 1/- per inch.)

ENAMELLING. For enamelling Qualities 1 & 2 one coat, in addition to the two coats of paint, add 5 per cent. to the prices.

GLAZING FILLETS. Galvanized steel fillets with brass screws for securing glass without front putty (strongly recommended for large casements glazed with plate glass), 4d. per lineal foot of fillet.

FILLETS FOR GROOVES. 4d. per lineal foot.

For instructions as to ordering see pages 78 & 79.

HOPE'S SECTION, 2a.

Inward Opening Casement with Frame

Bottom hung Casement (for use above transome), Quality 1, glazed with leaded glass and fitted with Spring Catch and Hope's Patent Passable Side Arms.

Side hung Casement, Quality 1, glazed with leaded glass and fitted with Handle 258 on Plate 208 & Stay 223

Outside

Inside

DETAILS
FULL SIZE

For full Specification of manufacture see page 7.

Price List of SECTION, 2a.

NOTE—All the list prices are for casements with square heads prepared to fix in inside rebates to details on page 20, and to receive plate glass in one sheet.

CASEMENTS HUNG AT SIDE

HEIGHT by any width not exceeding 2 feet.	Quality 1.	Quality 2.	Quality 1a.	Fixed Lights to Match.	French Casements see p p. 14 & 15 any width up to 4 feet.
Not exceeding 2ft. 6in.	39/-	35/-	49/-	10/-	87/-
,, ,, 3ft.	40/-	36/-	50/-	11/-	
,, ,, 3ft. 6in.	41/-	37/-	51/-	12/-	
,, ,, 4ft.	43/-	39/-	54/-	13/-	91/-
,, ,, 4ft. 6in.	45/-	41/-	56/-	14/-	95/-
,, ,, 5ft.	52/-	48/-	64/-	15/-	109/-
,, ,, 5ft. 6in.	54/-	50/-	67/-	16/-	113/-

For prices of L *Sections see page 43*

QUALITY 1 fitted with any of Hope's Bronze Handles on page 64 and Stay 223.

QUALITY 2 fitted with any of the Iron Handles on page 65 and Iron Cabin Hook.

QUALITY 1a, specially high finish, with bronze sills.

All casements over 4ft. 6in. high fitted with Double Grip Bolts (see page 68).

CASEMENTS HUNG AT BOTTOM

HEIGHT by any width not exceeding 2 feet.	Quality 1.	Quality 2.	Quality 1a.
Not exceeding 3ft. : :	34/-	30/-	43/-

QUALITY 1 fitted with Hope's Patent Passable Side Arms and Spring Catch. (See page 71 for full details of Patent Side Arms).

QUALITY 2 fitted with fixed Iron Side Arms and Spring Catch.

QUALITY 1a, specially high finish, with bronze sills.

EXTRAS

SPECIAL SHAPES. Circular or gothic heads, or circular on plan, 10/- each. (For French Casements, 20/- each).

BARS. Casements divided into panes with rebated bars, 9d. per pane. Saddle bars for leaded lights, 10d. each bar.

EXTRA WIDTHS. For widths over 2 feet add 4d. per inch. (For French Casements over 4 feet add 1/- per inch).

ENAMELLING. For enamelling Qualities 1 & 2 one coat, in addition to the two coats of paint, add 5 per cent. to the prices.

GLAZING FILLETS. Galvanized steel fillets with brass screws for securing glass without front putty (strongly recommended for large casements glazed with plate glass), 4d. per lineal foot of fillet.

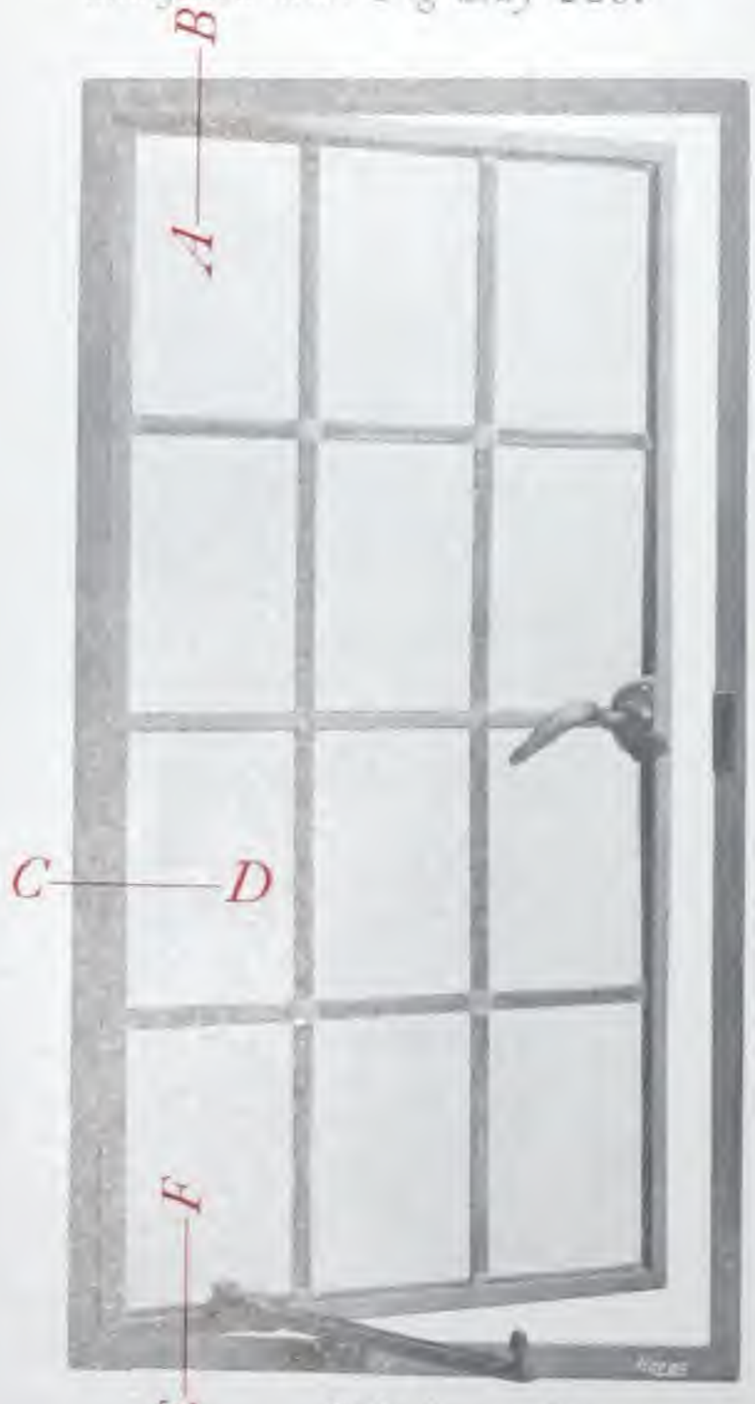
FILLETS FOR GROOVES. 4d. per lineal foot.

For instructions as to ordering see pages 78 & 79.

HOPE'S SECTION, 3.

Outward Opening Casement with Frame

Top hung Casement (for use above transome), glazed with leaded glass and fitted with P/g Stay 226.



Side hung Casement, glazed with leaded glass and fitted with Handle 963 on Plate 890 and Stay 226.

Outside

Inside

DETAILS
FULL SIZE

For full Specification of manufacture see page 7.

Price List of SECTION, 3.

NOTE—All the list prices are for casements with square heads prepared to fix in outside rebates as detail on page 22, and to receive plate glass in one sheet.

CASEMENTS HUNG AT SIDE

Not exceeding 2ft. 6in. high × 1ft. 9 in. wide - 23/- each
" " 3ft. 6in. " " " - 24/- "

FITTINGS. Iron Handle, 497, 577 or 963.
Iron Stay, 218, 219 or 226.

CASEMENTS HUNG AT TOP

Not exceeding 2ft. 6in. high - - - 21/- each

FITTINGS. Iron Stay, 218, 219 or 226.

Price List of SECTION, 3a.

Inward Opening Casement with frame

NOTE—Section 3a is similar to Section 3, but prepared for fixing to inside rebates of the same detail as Section 2a, page 20.

CASEMENTS HUNG AT SIDE

Not exceeding 2ft. 6in. high × 1ft. 9in. wide - 27/- each
" " 3ft. 6in. " " " - 28/- "

FITTINGS. Iron Handle, 497, 577 or 963.
Iron Cabin Hook.

CASEMENTS HUNG AT BOTTOM

Not exceeding 2ft. 6in. high - - - 25/- each

FITTINGS. Gunmetal Spring Catch and Iron Side Arms.

EXTRAS

SPECIAL SHAPES. Circular or gothic heads, or circular on plan, 8/- each.

BARS. Casements divided into panes with rebated bars, 9d. per pane.
Saddle bars for leaded lights, 10d. each bar.

ENAMELLING. For enamelling Qualities 1 & 2 one coat, in addition to the two coats of paint, add 5 per cent. to the prices.

BRONZE FITTINGS. If Bronze Handles and Stays are substituted for the Iron fittings specified above, add for side hung casements 4/- each; for top or bottom hung casements 3/- each.

For instructions as to ordering see pages 78 & 79.

HOPE'S SECTION, 4.

Outward Opening Casement with Frame

Top hung Casement. Quality 1 (for use above transome), with ⊥ bars and fitted with Hope's Patent Cam Opener.

Side hung Casement. Quality 1, with ⊥ bars and fitted with Handle 20a on Plate 890 and Stay 223.

DETAILS FULL SIZE

For full Specification of manufacture see page 7.

Price List of SECTION, 4.

NOTE—All the list prices are for casements with square heads prepared to fix in outside rebates to details on page 24, and to receive plate glass in one sheet.

CASEMENTS HUNG AT SIDE

HEIGHT by any width not exceeding 2 feet.	Quality 1.	Quality 2.	Quality 1a.	Fixed Lights to Match.	French Casements see p p. 10 & 11 any width up to 4 feet.
Not exceeding 3ft.	39/-	35/-	49/-	14/-	89/-
,, ,, 3ft. 6in.	40/-	36/-	50/-	15/-	
,, ,, 4ft.	42/-	38/-	52/-	16/-	
,, ,, 4ft. 6in.	44/-	40/-	54/-	17/-	93/-
,, ,, 5ft.	46/-	42/-	56/-	18/-	97/-
,, ,, 5ft. 6in.	56/-	51/-	66/-	19/-	117/-

For prices of L *Sections see p. 43*

QUALITY 1 fitted with any of Hope's Patent Two-point Bronze Handles on page 64 and Stay 223.

(If any of the Bronze Peg Stays on page 66 are substituted for Stay 223, deduct 1/- each).

QUALITY 2 fitted with any of the Iron Handles on page 65 and any of the Iron Peg Stays on page 67.

QUALITY 1a, specially high finish, with bronze sills.

All casements over 5 feet high are fitted with Double Grip Bolts (see page 68).

CASEMENTS HUNG AT TOP

HEIGHT by any width not exceeding 2 feet.	Quality 1.	Quality 2.	Quality 1a.
Not exceeding 3ft. : :	35/-	31/-	44/-

QUALITY 1 fitted with Openers 506, 727 or 502 (see pages 70 and 71).

(If any of the Bronze Peg Stays on page 66 are substituted, deduct 1/- each).

QUALITY 2 fitted with any of the Iron Peg Stays on page 67.

QUALITY 1a, specially high finish, with bronze sills.

EXTRAS

SPECIAL SHAPES. Circular or gothic heads, or circular on plan, 12/- each.

(For French Casements 25/- each).

BARS. Casements divided into panes with rebated bars, 9d. per pane.

Saddle bars for leaded lights, 10d. each bar.

EXTRA WIDTHS. For widths over 2 feet add 6d. per inch.

(For French Casements over 4 feet, add 1/- per inch).

ENAMELLING. For enamelling Qualities 1 & 2 one coat, in addition to the two coats of paint, add 5 per cent. to the prices.

GLAZING FILLETS. Galvanized steel fillets with brass screws for securing glass without front putty (strongly recommended for large casements glazed with plate glass), 4d. per lineal foot of fillet.

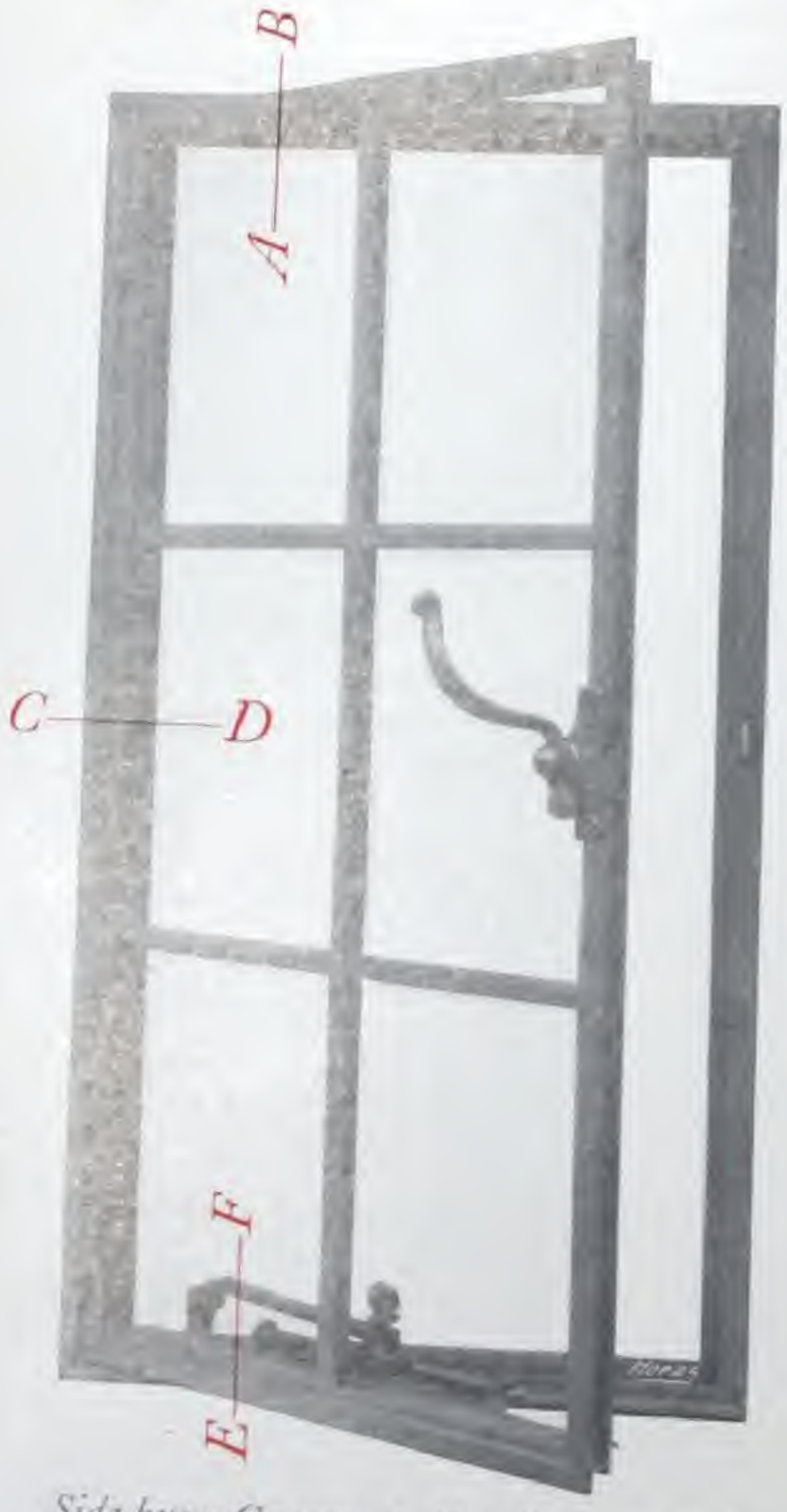
FILLETS FOR GROOVES. 4d. per lineal foot.

For instructions as to ordering see pages 78 & 79.

HOPE'S SECTION, 4a.

Inward Opening Casement with Frame

Bottom hung Casement, Quality 1, *with* ⊥ *bars & fitted with Hope's Patent Passable Side Arms and Spring Catch.*



Side hung Casement, Quality 1, *with* ⊥ *bars and fitted with Handle* 258 *and Stay* 223.

DETAILS FULL SIZE

For full Specification of manufacture see page 7.

Price List of SECTION, 4a.

NOTE—All the list prices are for casements with square heads prepared to fix on outside rebates as details on page 26, and to receive plate glass in one sheet.

CASEMENTS HUNG AT SIDE

HEIGHT (in any width not exceeding 2 feet)	Quality 1.	Quality 2.	Quality 1a.	Fixed Lights to Match.	French Casements not to exceed 6 ft. 6 in. high in any width up to 4 feet.
Not exceeding 3ft.	45/-	41/-	55/-	14/-	
" " 3ft. 6in.	46/-	42/-	56/-	15/-	
" " 4ft.	48/-	43/-	58/-	16/-	101/-
" " 4ft. 6in.	50/-	45/-	60/-	17/-	105/-
" " 5ft.	52/-	47/-	62/-	18/-	109/-
" " 5ft. 6in.	61/-	57/-	73/-	19/-	129/-

QUALITY **1** fitted with any of Hope's Bronze Handles on page 64 and Stay 223.

QUALITY **2** fitted with Iron Handles to any of the patterns on page 65 and Stay 223.

QUALITY **1a**, specially high finish, with bronze sills.

All casements over 5 feet high are fitted with Double Grip Bolts (see page 72).

CASEMENTS HUNG AT BOTTOM

HEIGHT (in any width not exceeding 2 feet)	Quality 1.	Quality 2.	Quality 1a.
Not exceeding 3ft. : :	41/-	37/-	53/-

QUALITY **1** fitted with Hope's Patent Pressable Side Arms and Spring Catch. (See page 71 for full details of Patent Side Arms).

QUALITY **2** fitted with fixed Iron Side Arms and Spring Catch.

QUALITY **1a**, specially high finish, with bronze sills.

EXTRAS

SPECIAL SHAPES. Circular or gothic heads, or circular on plan, 12/- each.
(For French Casements 15/- each).

BARS. Casements divided into panes with rebated bars, 9d. per pane.
Saddle bars for leaded lights, 1/0d. each bar.

EXTRA WIDTHS. For widths over 2 feet add 6d. per inch.
(For French Casements over 4 feet, add 1/- per inch).

ENAMELLING. For enamelling Qualities 1 & 2 one coat, in addition to the two coats of paint, add 5 per cent. to the prices.

GLAZING FILLETS. Galvanized steel fillets with brass screws for securing glass without front putty (strongly recommended for large casements glazed with plate glass), 4d. per lineal foot of fillet.

FILLETS FOR GROOVES. 4d. per lineal foot.

For instructions as to ordering see pages 78 & 79

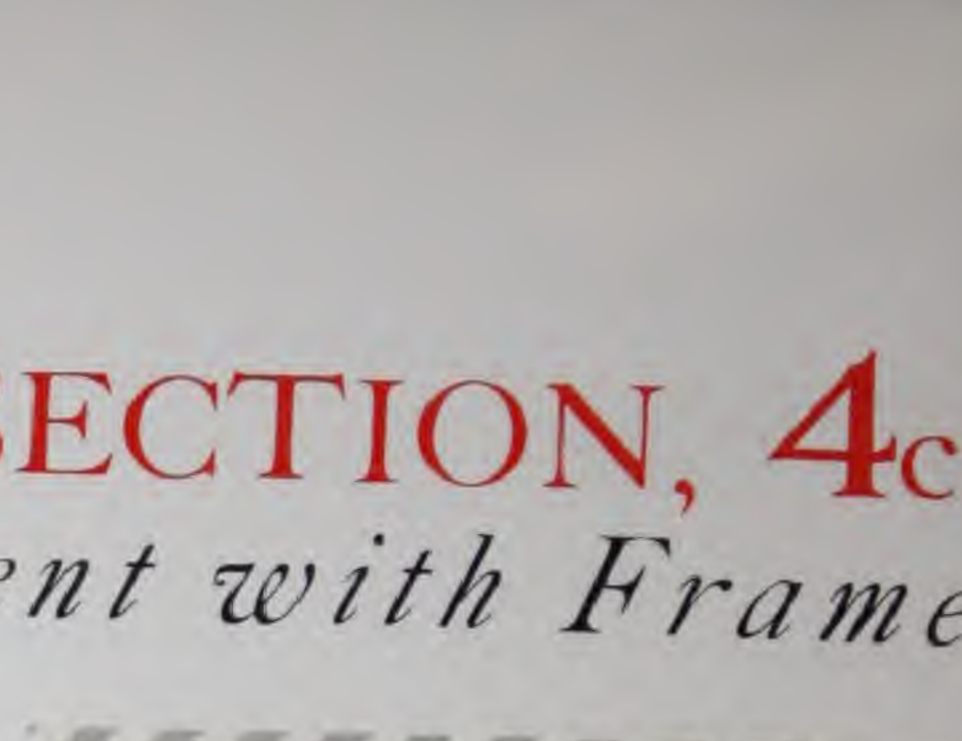
HOPE'S SECTION, 4c.

Cleaning Casement with Frame

Swinging Casement, Quality 1 *with* ⊥ *bars and fitted with Hope's Spring Catch and Cord Eye.*

Cleaning Casement, Quality 1, *with* ⊥ *bars and fitted with Handle* 20a *on Plate* 890 *and Stay* 223.

Outside



Inside

DETAILS FULL SIZE

For full Specification of manufacture see page 7.

Price List of SECTION, 4c.

NOTE—All the list prices are for casements with square heads prepared to fix in outside rebates to details on page 28, and to receive plate glass in one sheet.

CLEANING CASEMENTS

Hung on vertical pivots to allow of cleaning the outside of the casement from the inside. (See note to Section 1c, page 17.)

HEIGHT by any width not exceeding 2 feet.	Quality 1.	Quality 2.	Quality 1a.	Prices of Fixed Lights to match Casements.
Not exceeding 3ft.	54/-	50/-	64/-	14/-
,, ,, 3ft. 6in.	55/-	51/-	65/-	15/-
,, ,, 4ft.	57/-	53/-	67/-	16/-
,, ,, 4ft. 6in.	59/-	55/-	69/-	18/-
,, ,, 5ft.	61/-	57/-	71/-	20/-
,, ,, 5ft. 6in.	71/-	67/-	81/-	22/-

QUALITY 1 fitted with any of Hope's Patent Two-point Bronze Handles on page 64 and Stay 223.

(If any of the Bronze Peg Stays on page 66 are substituted for Stay 223, deduct 1/- each).

QUALITY 2 fitted with any of the Iron Handles on page 65 and any of the Iron Peg Stays on page 67.

QUALITY 1a, specially high finish, with bronze sills.

All casements over 5 feet high are fitted with Double Grip Bolts (see page 68).

SWINGING CASEMENTS (Section 4 swing)

HEIGHT by any width not exceeding 2 feet.	Quality 1.	Quality 2.	Quality 1a.
Not exceeding 3ft. : :	34/-	32/-	44/-

QUALITY 1 fitted with gunmetal Spring Catch and Cord Eye and Pulley.

QUALITY 2 fitted with eyes and pulley for cord.

QUALITY 1a, specially high finish, with bronze sills.

EXTRAS

SPECIAL SHAPES. Circular or gothic heads, or circular on plan, 12/- each.

(Shaped heads in Cleaning Casements are made as a fixed light above the spring line).

BARS. Casements divided into panes with rebated bars, 9d. per pane.

Saddle bars for leaded lights, 10d. each bar.

EXTRA WIDTHS. For widths over 2 feet add 6d. per inch.

ENAMELLING. For enamelling Qualities 1 & 2 one coat, in addition to the two coats of paint, add 5 per cent. to the prices.

GLAZING FILLETS. Galvanized steel fillets with brass screws for securing glass without front putty (strongly recommended for large casements glazed with plate glass), 4d. per lineal foot of fillet.

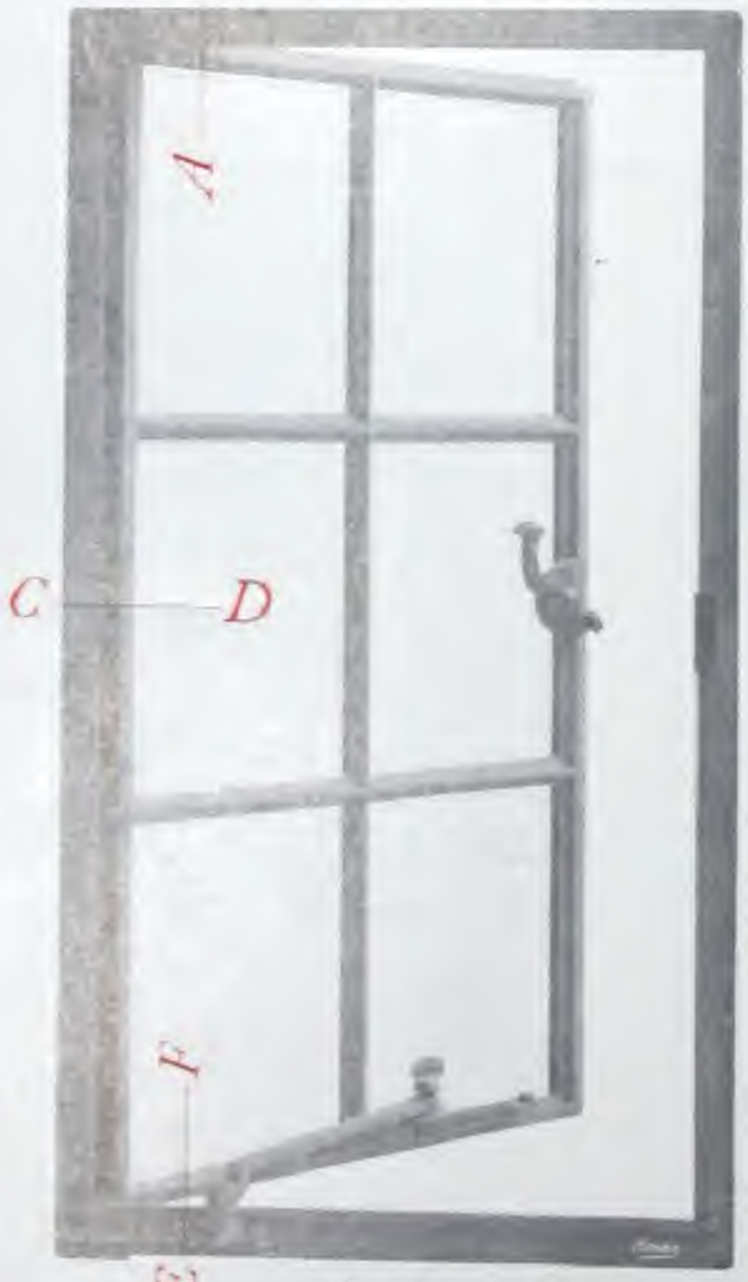
FILLETS FOR GROOVES. 4d. per lineal foot.

For instructions as to ordering see pages 78 & 79.

HOPE'S SECTION, 6.

Outward Opening Casement with Frame

Top hung Casement, Quality 1 *(for use above transome), with moulded and rebated bars, and fitted with* B *Hope's Patent Cam Opener.*



Side hung Casement, Quality 1, *with moulded and rebated bars, fitted with Handle* 20a *on Plate* 890 *and Stay* 223.

NOTE.—Sections 6 *and* 6a *may have the mouldings on the outside if preferred.*

DETAILS FULL SIZE

Prices of Section 6 are the same as for Section 2. See page 19.

HOPE'S SECTION, 6a.

Inward Opening Casement with Frame

Bottom hung Casement, Quality 1 *(for use above transome), with moulded and rebated bars, and fitted with Hope's Patent Passable Side Arms and Spring Catch.*

Side hung Casement, Quality 1, *with moulded and rebated bars, fitted with Handle* 258 *on Plate* 890 *&* *Stay* 223.

Outside

Section A—B

Section C—D

Inside

NOTE.—Sections 6 and 6a may have the mouldings on the outside if preferred.

Section E—F

DETAILS FULL SIZE

Prices of Section 6a are the same as for Section 2a. See page 21.

HOPE'S SECTION, 7.

"Tudor" Casement *British Pat.* 29817.

Top hung Casement, Quality 1, *(for use above transome), glazed with leaded lights and fitted with Peg Stay* 218.

Side hung Casement, Quality 1, *glazed with leaded lights, & fitted with Handle* 497 *on Plate* 890 *and Stay* 223.

Outside

DETAILS FULL SIZE

Inside

For full Specification of manufacture see page 7.

For Price List of SECTION, 7

see page 19, the prices being the same as for Section 2.

NOTE.—This Section is only supplied for leaded lights, and it is essential that the leaded glass should be soldered and cemented to the casement (as shewn on the detail on page 32) *before* leaving the works. At least one week should be allowed for the cement to set before delivery.

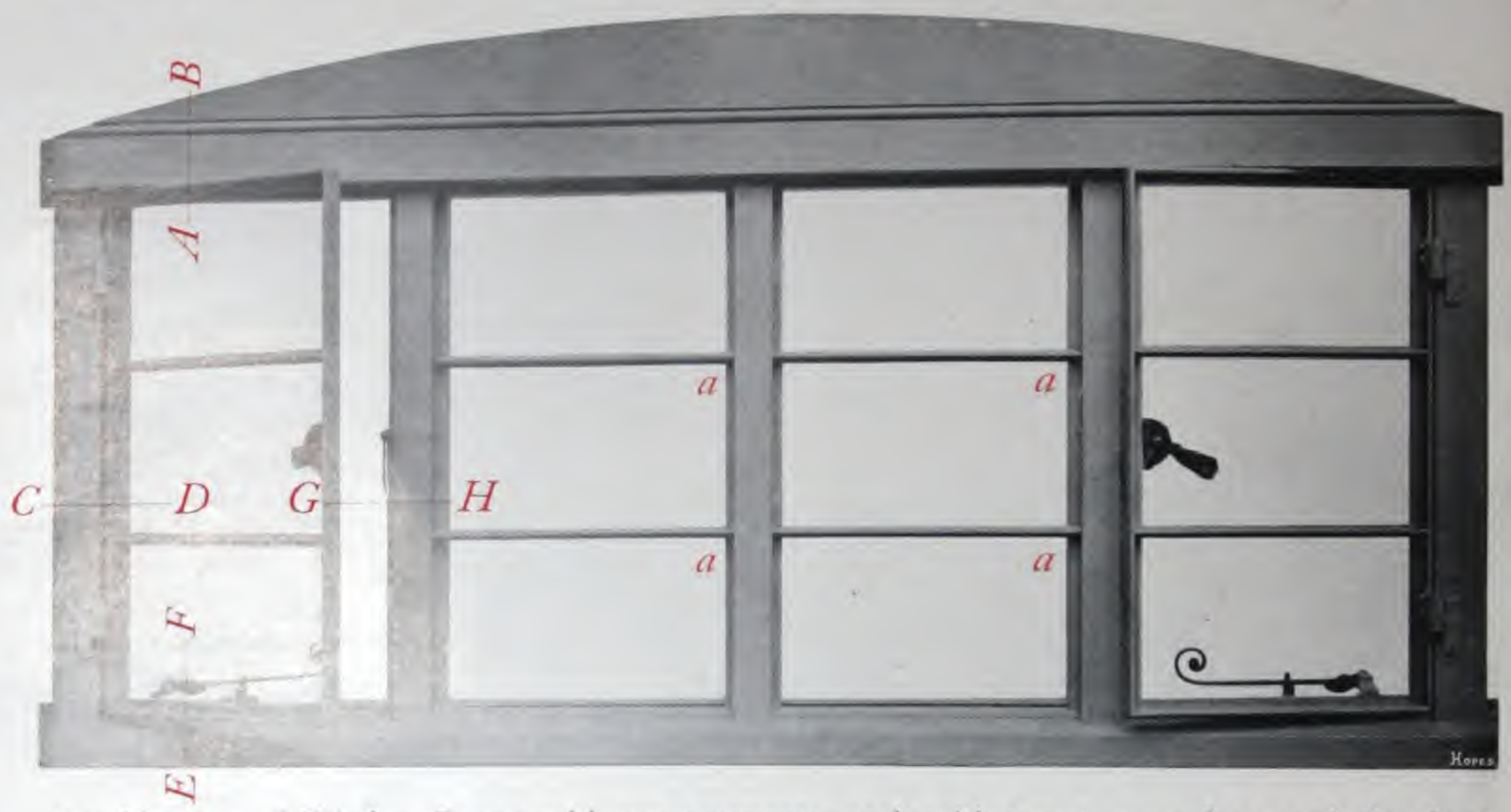
This view shews a window fitted with two, side hung "Tudor" Casements, one above transome and one below.

THE "Tudor" Casement (Section 7) has been designed to meet the requirements of Architects who prefer a FLAT IRON Casement for its appearance, but who very properly object to the imperfections usually associated with this type of window.

It is a complete Casement and Frame, perfectly fitted and finished in our workshops, and prepared for fixing by screws which pass into the heart of the mullion and jambs. Those who have experienced the difficulty of plugging and screwing to stone or brickwork on its outer edges, for hinges and loose slips, will appreciate the solidity and simplicity of the "Tudor" fixing.

For prices of leaded glass see pages 80 to 86, to which must be added 2/6 for soldering and cementing to each opening casement of this Section.

HOPE'S SECTION, 8.
Garden City Casement



Outside view of Window Frame with two casements, each with two ⊥ cross bars and the fixed openings with ⊥ cross bars housed into the mullions and all glazed with sheet glass.

NOTE.—The ⊥ cross bars (a) should be housed into the fixed openings before the wood frames are wedged up.

Price List of SECTION, 8.

NOTE—All the list prices are for casements with square heads prepared to fix in outside rebates to details on page 34, and to receive plate glass in one sheet.

CASEMENTS HUNG AT SIDE

Not exceeding 3ft. high - - - 11/- each.
" " 4ft. " - - - 12/- "

FITTINGS. Iron Handle (Nos. 497, 577 or 963) and Iron Stay (Nos. 218 or 210).

CASEMENTS HUNG AT TOP

Not exceeding 2ft.6in. high - - - 10/- each.

Fitted with Peg Stay only.

EXTRAS

SPECIAL SHAPES. Circular or gothic heads, or circular on plan, 4/- each.

BARS. Casements divided into panes with rebated bars, 9d. per pane.
Saddle bars for leaded lights, 8d. ea. bar. Rebated cross bars, 10d. ea. bar.
Rebated cross bars for housing into wood frames, 4d. each bar.

BRONZE FITTINGS. If Bronze Handles and Stays are supplied instead of Iron as specification, 3/- each casement.

IRON CABIN HOOK. To hold casement about two inches open - 6d. each.
If Bronze Swivel Cabin Hook " " " - 1/6 "

ENAMELLING. For enamelling one coat, in addition to the two coats of paint, add 5 per cent. to the prices.

BEVELLED SLIPS. As detail, 3/- each casement.

NOTE—The rebate in wood frames must be 1½ × ½in. when slips are used.

Plan of Jamb
Half full size
shewing slips

AN English casement window is generally admitted to be the most suitable form of window for Garden City buildings, but hitherto many people have been deterred from using *metal* casements on account of the cost.

Hope's "Garden City" Casement has been produced at a price that places it on equal terms with a wooden casement, and it should be noted that the prices include the hinges, handles and stays, and that all of these are of substantial design and first class manufacture.

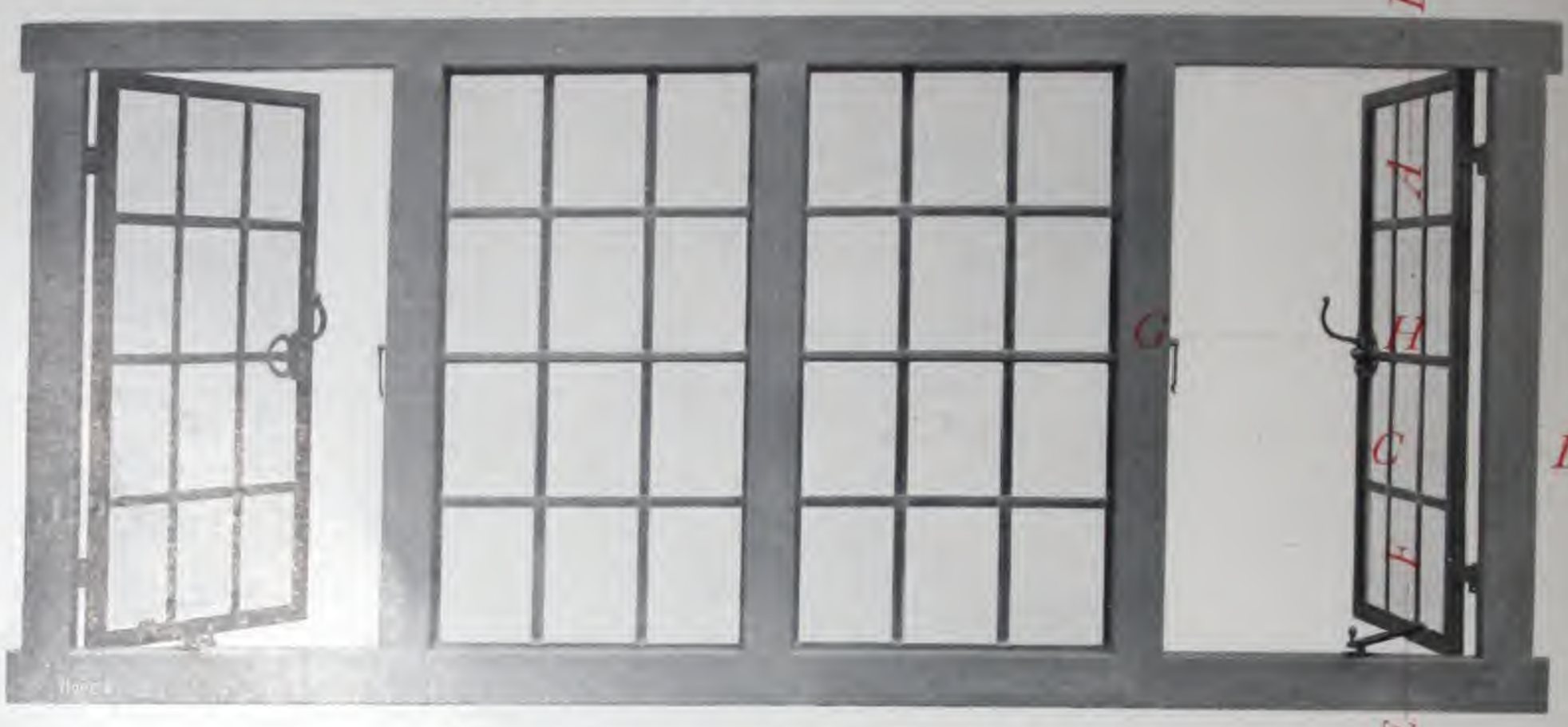
Any carpenter can make the frame, which is rebated the same for casements as for fixed sheets of glass, and when fitted with ⊥ cross bars (as on the photograph) and glazed with sheet glass will be found to give a very pleasing appearance and at the same time to be extremely economical.

NOTE—The ⊥ cross bars shewn in the illustration are only a suggestion and may be varied as required, or leaded glass may be employed.

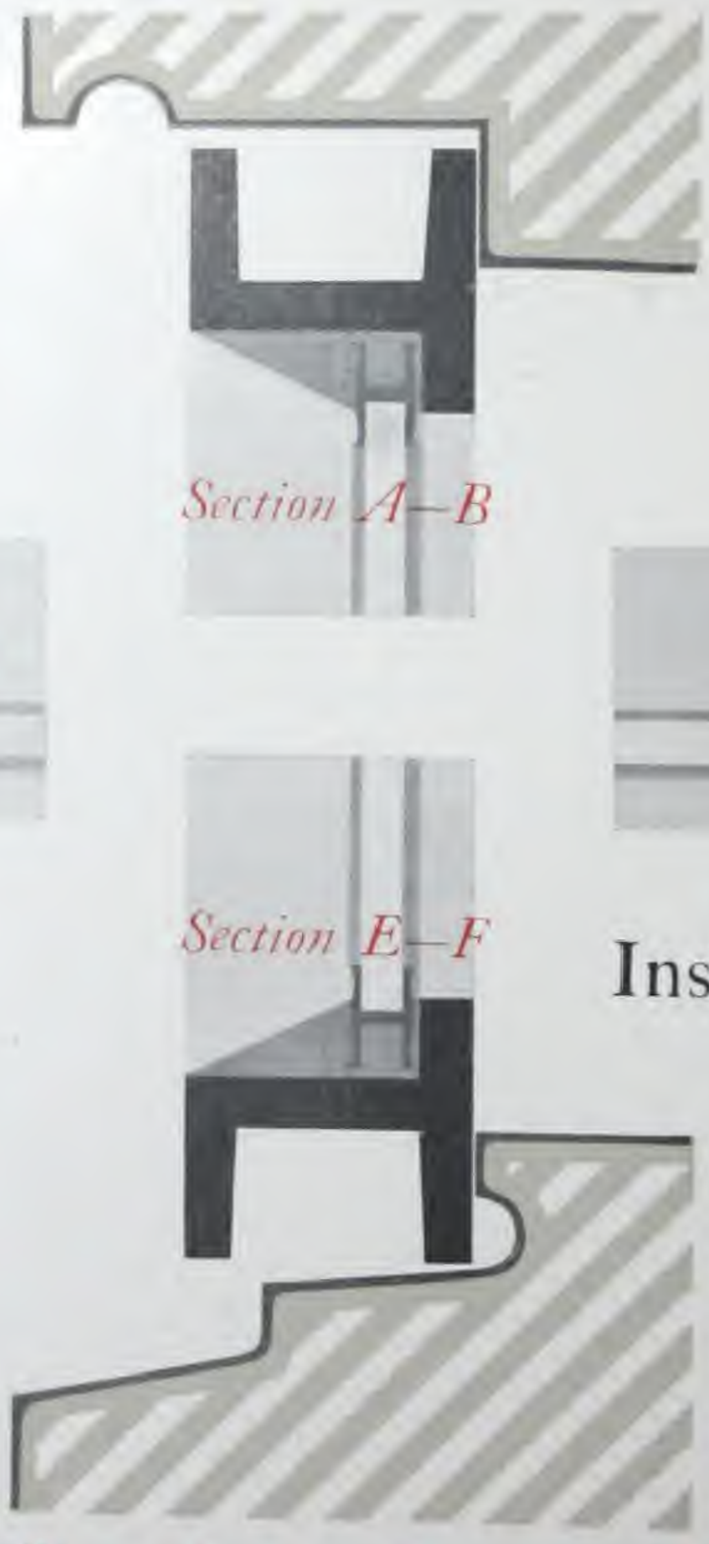
For instructions as to ordering see pages 78 & 79.

HOPE'S SECTION, 9.

Outward Opening Casement without Frame



Window Frame with two casements of Section 9, quality 1, glazed with leaded lights with $\frac{3}{8}$" cames; the two fixed sheets in the middle have the leaded lights glazed direct into the rebates in the wood frame.



Outside

Section A—B

Section G—H

Section C—D

Inside

Section E—F

DETAILS
FULL SIZE

For full Specification of manufacture see page 7.

Price List of SECTION, 9.

NOTE—All the list prices are for casements with square heads prepared to fix in outside rebates to details on page 36, and to receive plate glass in one sheet.

CASEMENTS HUNG AT SIDE

HEIGHT by any width not exceeding 2 feet.	Quality 1	Quality 2	Quality 1a	Bevelled slips as detail below, add	
				Qualities 1 & 2	Quality 1a
Not exceeding 3ft. : :	22/-	19/-	25/-	3/-	4/-
,, ,, 3ft. 6in. :	23/-	20/-	26/-	3/6	4/6
,, ,, 4ft. : :	24/6	21/6	27/6	4/-	5/-
,, ,, 4ft. 6in. :	26/-	23/-	29/-	4/6	5/6

QUALITY **1** fitted with any of the Bronze Handles on page 64 and any of the Bronze Peg Stays on page 66.

QUALITY **2** fitted with any of the Iron Handles on page 65 and any of the Iron Peg Stays on page 67.

QUALITY **1a**, specially high finish, with bronze sills.

CASEMENTS HUNG AT TOP

HEIGHT by any width not exceeding 2 feet.	Quality 1	Quality 2	Quality 1a
Not exceeding 3ft. : :	19/-	18/-	22/-

QUALITY **1** fitted with any of the Bronze Peg Stays on page 66.

QUALITY **2** fitted with any of the Iron Peg Stays on page 67.

QUALITY **1a**, specially high finish, with bronze sills.

EXTRAS

SPECIAL SHAPES. Circular or gothic heads, or circular on plan, 6/- each.

BARS. Casements divided into panes with rebated bars, 9d. per pane.
Saddle bars for leaded lights, 10d. each bar.
Rebated cross bars for housing into wood frames, 4d. each bar.

BRONZE CABIN HOOK. To hold casement open about two inches, 1/6 each.

EXTRA WIDTHS. For widths over 2ft., add 3d. per inch.

ENAMELLING. For enamelling one coat, in addition to the two coats of paint, add 5 per cent. to the prices of qualities 1 and 2.

BEVELLED SLIPS. See above.

NOTE.—The rebate in wood frames must be 1½ inches × ½ inch when slips are used.

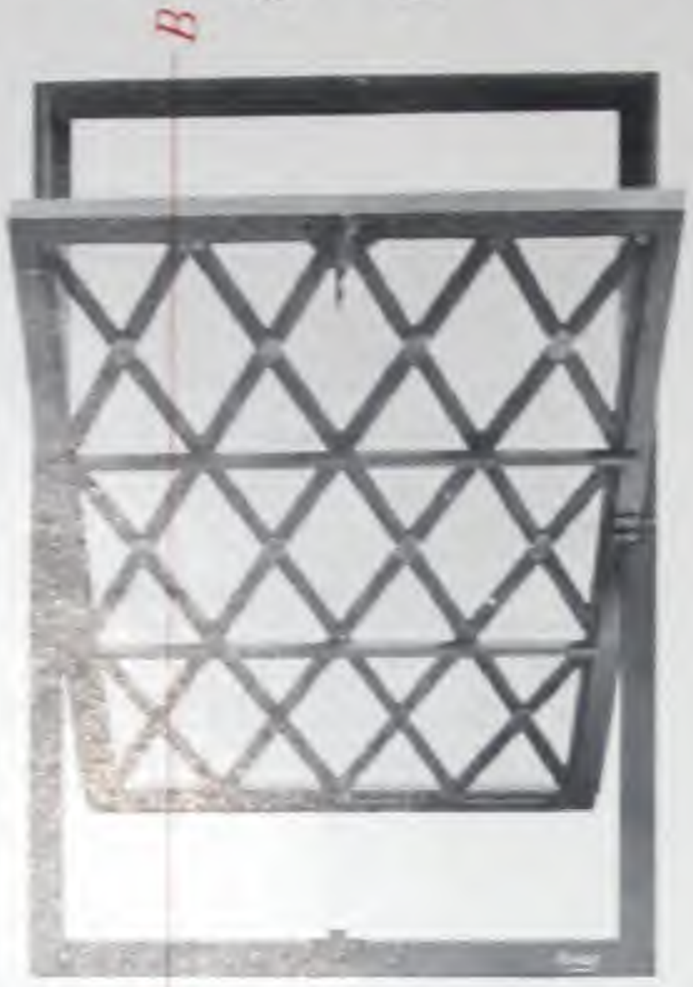
DETAIL SHEWING BEVELLED SLIPS

Plan of jamb
Half full size

For instructions as to ordering see pages 78 & 79.

HOPE'S SECTIONS, 13, 14 & 15

Swinging Casements with Frames



Swinging Casement, Quality 1, *glazed with leaded glass.*

Outside

SECTION 14

SECTION 13

DETAILS
FULL SIZE

For full Specification of manufacture see page 7.

Price List of SECTIONS, 13, 14 & 15

NOTE—All the list prices are for casements with square heads prepared to fix in outside rebates as details on page 38, *and to receive one sheet of glass.*

SECTION 13

HEIGHT by any width not exceeding 2 feet.	Quality 1	Quality 2
Not exceeding 2ft. : :	18/6	16/6
,, ,, 2ft. 6in. : :	19/-	17/-
,, ,, 3ft. : :	20/-	18/-

NOTE—The rebate for Section 13 *must not exceed* $\frac{1}{4}$" *in depth.*

SECTION 14

HEIGHT by any width not exceeding 2 feet.	Quality 1	Quality 2	Quality 1a
Not exceeding 2ft. : :	26/-	24/-	29/-
,, ,, 2ft. 6in. :	27/-	25/-	30/-
,, ,, 3ft. : :	28/6	26/6	31/6

SECTION 15

HEIGHT by any width not exceeding 2 feet.	Quality 1	Quality 2	Quality 1a
Not exceeding 2ft. 6in. :	29/-	27/-	32/-
,, ,, 3ft. : :	30/-	28/-	33/-
,, ,, 3ft. 6in. :	31/6	29/6	34/6
,, ,, 4ft. : :	34/-	32/-	37/-

QUALITY **1** fitted with gunmetal Spring Catch and Cord Eye and Pulley.
QUALITY **2** fitted with eyes and pulley for cord.
QUALITY **1** a, specially high finish, with bronze sills.

SECTION 11

A light L Section Casement and Frame, fitted with eyes and pulley, 12/6 each.

EXTRAS

SPECIAL SHAPES. Circular or gothic heads, 6/- each.

BARS. Casements divided into panes with rebated bars, 9d. per pane.
Saddle bars for leaded lights, 10d. each bar.

EXTRA WIDTHS. For widths over 2 feet, add 3d. per inch.

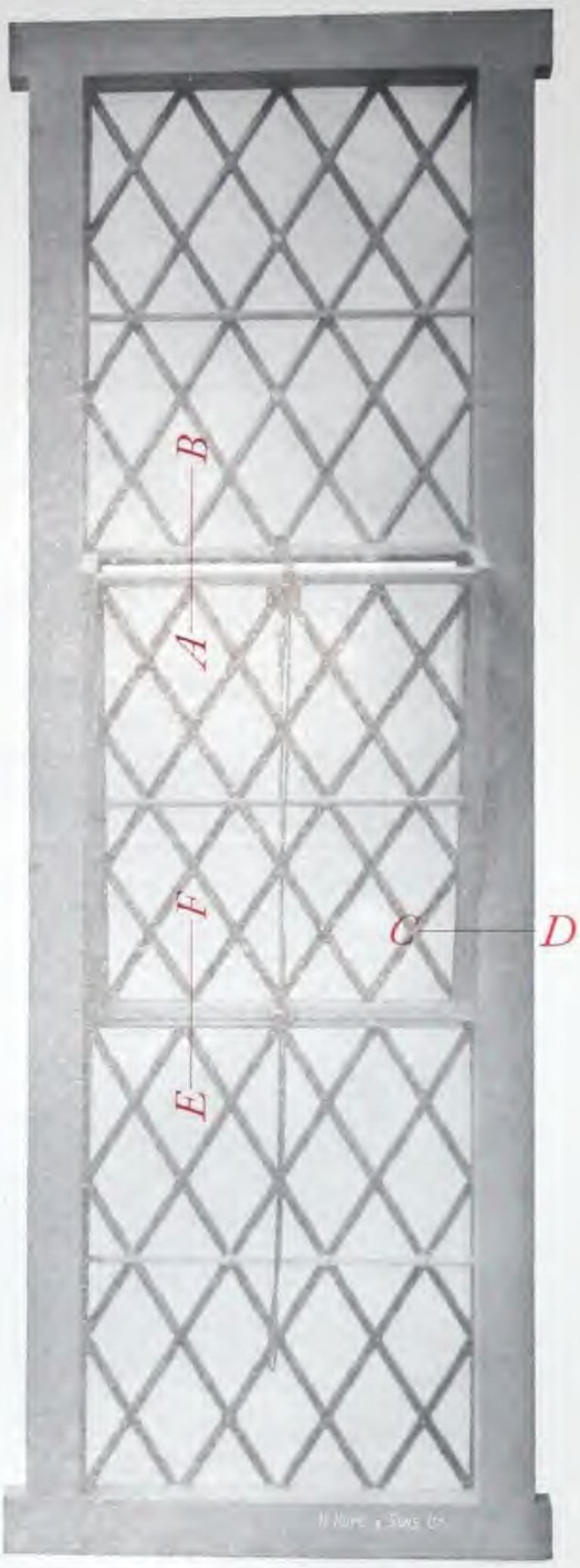
ENAMELLING. For enamelling qualities 1 and 2, one coat in addition to the two coats of paint, add 5 per cent. to the prices.

FILLETS FOR GROOVES. 4d. per lineal foot.

For instructions as to ordering see pages 78 & 79.

HOPE'S SECTION, 12a.

Hopper Casements



Window frame with one hopper, Quality 1, glazed with leaded lights.

DETAILS
FULL SIZE

HOPPERS as illustrated above, but fitted with eyes and pulleys to work with cords up to 30 in. high by 24 in. wide - - 15/- each

EXTRAS

Bronze Spring Catch to work with window stick - -	1/6 each
Bronze Spring Catch Pulley to work with cords - -	2/- ,,
Saddle bars for leaded lights - - - - -	10d. each bar
Fillets for grooves - - - - - -	4d. per lineal foot

NOTE.—The detail above illustrates a hopper rebated for glass top and bottom. Hoppers are supplied rebated at top only or at bottom only, or for fixing to head and sill, at the same price.

N.A.P. *Passable Hopper Cheeks*

Window frame with two hopper casements, one resting on face-plate, the other "passed," or free for cleaning.

These cheeks are designed to allow of fanlights being folded right back for cleaning. The face-plates, on which the fanlights rest when open, are provided with inclined slots and hung on pins attached to the cheeks. Both plates can be raised with a lateral motion by means of hooks provided for the purpose, so that the fanlight can pass. One only of each pair is provided with a simple catch to keep the face-plate in its raised position, so as to leave both hands free to hold the other plate back while opening the fanlight. On releasing the hooks both plates automatically return to their original positions.

HEIGHT	Prices per pair.	Fittings suitable for N.A.P. Cheeks, or Plain Cheeks.
Not exceeding 2ft. :	9/6	Gunmetal ball catches - 3/- per pair.
" " 2ft. 6in.	10/6	Gunmetal spring catch
" " 3ft. :	11/9	and striking plate - 3/3 each.
" " 3ft. 6in.	13/-	Gunmetal 3in. butts - 2/- per pair.

If an iron bar is required to connect the tops of cheeks to ensure greater rigidity, 1/- each extra.

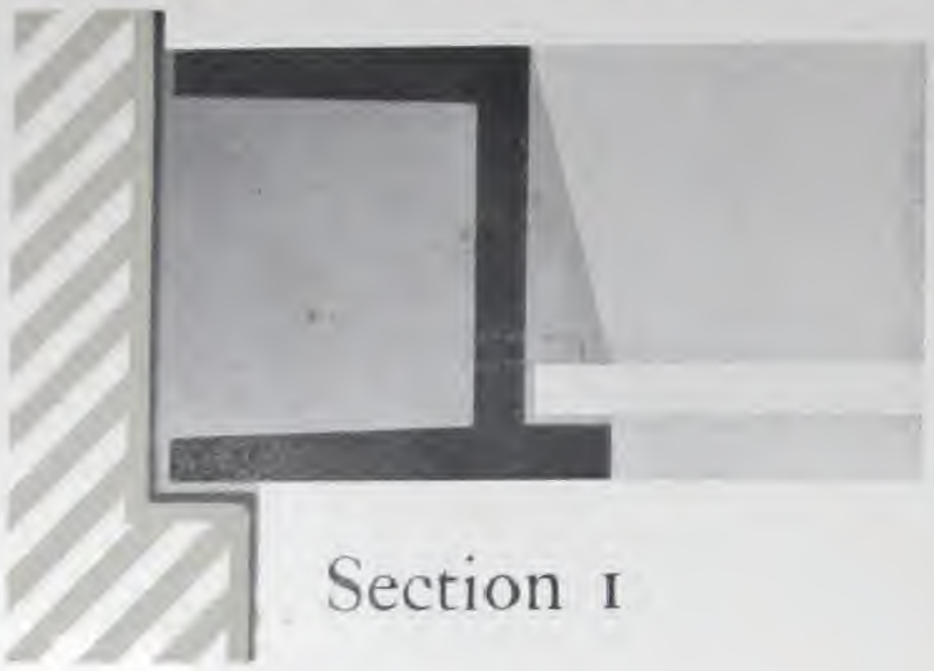
Plain Hopper Cheeks

Similar to above, but without patent N.A.P. passable face-plates.
Any size up to 3ft. high, 7/- per pair.
Prices of spring catches, hinges, etc., same as above.

The illustration shews wooden fanlight open, and resting on the face-plates of plain hopper cheeks.

HOPE'S FIXED LIGHTS

Full Size Details.



Section 1

Section 4

Section 2

Section 3

Section 6

Section 8

$I\frac{1}{4}'' \times \frac{3}{4}'' L$

$I'' \times \frac{3}{4}'' L$

$I\frac{1}{4}'' \times I'' L$

Price List of FIXED LIGHTS

SECTIONS, 1, 2, 3, 4, 6 & 8.

NOTE—All the list prices are for Fixed Lights with square heads prepared to fix in outside rebates to details on page 42, and to receive plate glass in one sheet.

HEIGHT by any width not exceeding 2 feet.	Section 1	Section 2 and Section 6	Section 3	Section 4	Section 8
Not exceeding 3ft. :	14/-	11/-	8/6	12/-	6/-
,, ,, 3ft. 6in.	15/-	12/-	9/-	13/-	6/6
,, ,, 4ft. :	16/-	13/-	10/-	14/-	7/-
,, ,, 4ft. 6in.	17/-	14/-	11/-	15/-	7/6
,, ,, 5ft. :	18/-	15/-	12/-	16/-	8/6
,, ,, 5ft. 6in.	19/-	16/-	13/-	17/-	10/-
,, ,, 6ft. :	20/-	17/-	14/-	18/-	12/-

ANGLE SECTIONS

HEIGHT by any width not exceeding 2 feet.	1¼ in. × 1 in.	1¼ in. × ¾ in.	1 in. × ¾ in.
Not exceeding 3ft. : :	6/6	6/-	5/9
,, ,, 3ft. 6in. : :	7/-	6/6	6/3
,, ,, 4ft. : :	7/6	7/-	6/9
,, ,, 4ft. 6in. : :	8/-	7/6	7/3
,, ,, 5ft. : :	9/-	8/6	8/-
,, ,, 5ft. 6in. : :	11/-	10/-	9/6
,, ,, 6ft. : :	13/-	12/-	11/6

EXTRAS

SPECIAL SHAPES. Circular or gothic heads, or circular on plan, Section **1**, 6/- each; Sections **2**, **3**, **4** and **6**, 4/- each. Section **8** and Angle Sections, 3/- each.

BARS. Fixed Lights divided into panes with rebated bars, 9d. per pane. Saddle bars for leaded lights, 10d. each bar.

EXTRA WIDTHS. For widths over 2 feet add, for Section **1**, 4d. per inch; for Sections **2**, **3**, **4** and **6**, 3d. per inch. Angle Sections and Section **8**, 2d. per inch.

ENAMELLING. For enamelling one coat, in addition to the two coats of paint, add 5 per cent. to the prices.

GLAZING FILLETS. Galvanized steel fillets with brass screws for securing glass without front putty (strongly recommended for large fixed lights glazed with plate glass), 4d. per lineal foot of fillet.

FILLETS FOR GROOVES. 4d. per lineal foot.

For instructions as to ordering see pages 78 & 79.

Notes on Windows for Offices

(Pages 46 to 53.)

Architectural Value. The Frames are designed for setting direct into the masonry and as there are no bulky surrounds, it is possible (with a given area of glass) to obtain a better relation of void to solid in the wall surface.

Building Detail. No special preparation is required. The steel frames which we provide with all our windows of this class allow for setting in the clear daylight opening of the masonry, and it is only necessary to form an inside check or rebate in the usual manner by the set-back of the rough brickwork inside. The width of this rebate should allow for the thickness of the inside trim or finish, such as plaster, wood panel, or marble.

Daylight & Hygiene. Hope's windows provide a maximum amount of light with a clean and attractive finish inside and out. The setting of the frames makes a solid job with the building structure, leaving no spaces for dirt, vermin, or insects.

Protection against Fire is positive.

Ventilation is afforded in a variety of ways to suit all conditions. *The maximum opening afforded by a sliding sash is only* 50% *of its area. Hope's windows give a range of from* 100% *to* 1%, *with the option of opening in such a manner as to allow for the direction of the wind.*

Cleaning. The whole of the outside of the glass can be cleaned with safety from inside the building.

HOPE'S

Steel Windows for Offices

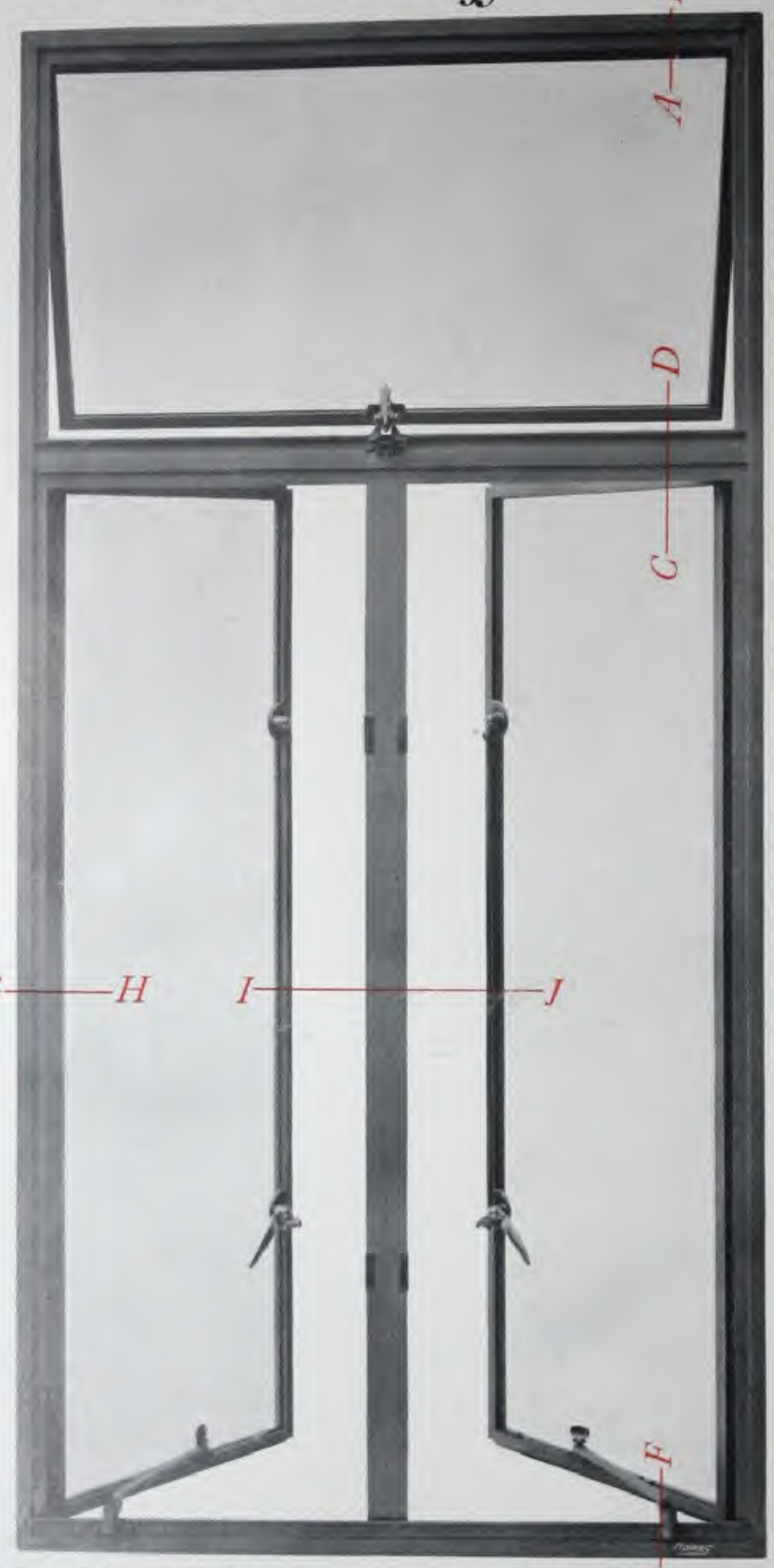
ROYAL INSURANCE BUILDINGS, SAN FRANCISCO
Howells & Stokes, Architects

THE windows which we illustrate in the following pages (46 to 53), represent our latest practice in window design for Offices and Commercial Buildings. We have given this branch of our work the closest attention for some years, and have perfected a type of window which entirely satisfies modern demands.

The health, comfort, convenience and safety of vast numbers of people who spend the greater part of each day in office buildings is largely affected by the construction and design of the windows. These should provide for a maximum amount of light for the area of the wall opening; absolute exclusion of rain, wind and dust; a system of ventilating casements which will allow of simple and easy adjustment to suit the needs of various people; a means of cleaning the whole of the outside of the glass from inside the building; and protection against fire from within and without.

HOPE'S *Office Windows*

Z
Design
Section 1



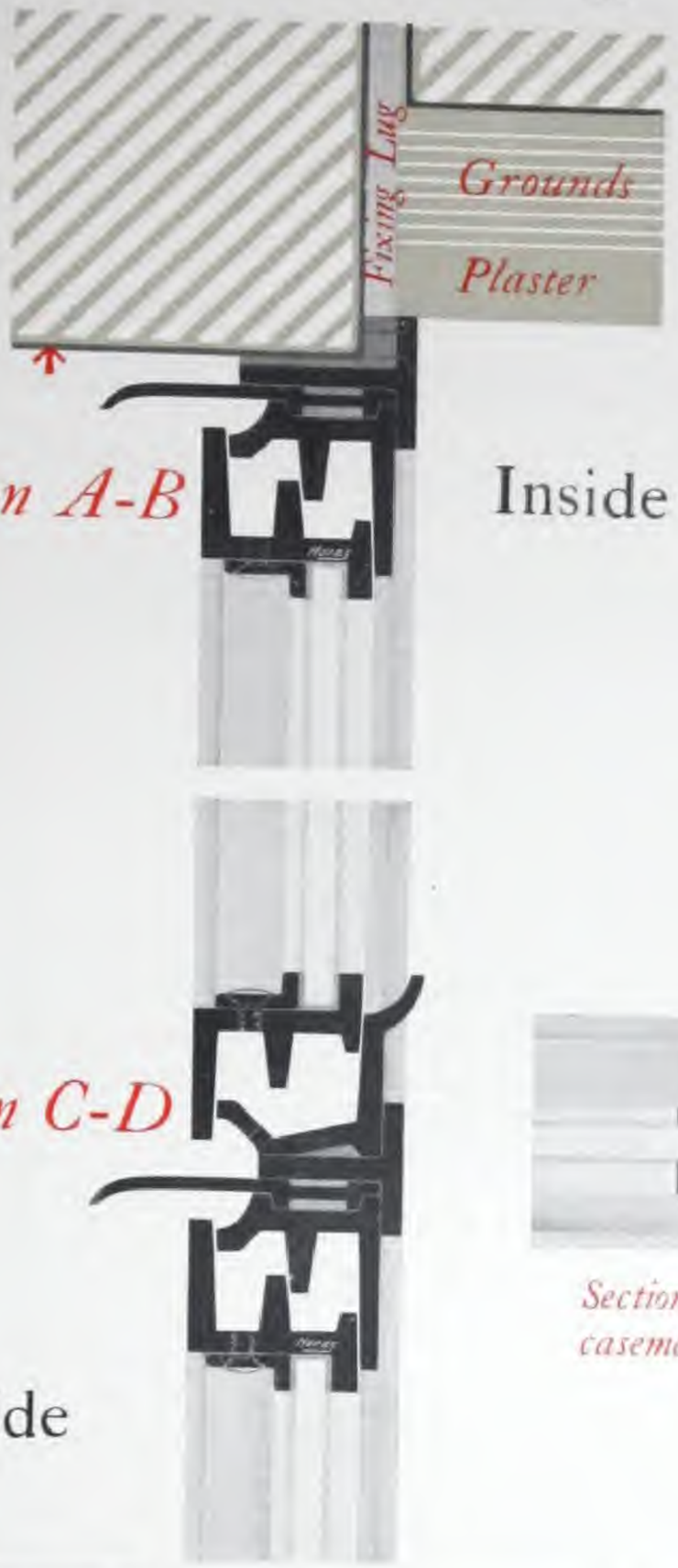
Hope's Office Window with two side hung casements and fixed mullion, and one top hung casement above transome, Section 1, Quality 1, fitted with Double Grip Bolt, with Handle 963 on Plate 890, and Stay 223; Patent Cam Opener to transome light.

PRICES. With or without Fixed Mullion

Z1	As illustration, with Transome Light hung at top	-	£12 0s. each
Z2	As illustration, but with Transome Light fixed	-	£10 0s. „
Z3	As illustration, but with Transome Light to swing	-	£11 10s. „

The prices are for windows not exceeding 7 ft. 6 in. × 4 ft., including frame and glazing fillets.
For extra height add 7/- per 6 inches; for extra width, 1/6 per inch.
This window can be supplied in Section 4 at 15 per cent. less than the above prices.

Half Full Size Details of Office Window

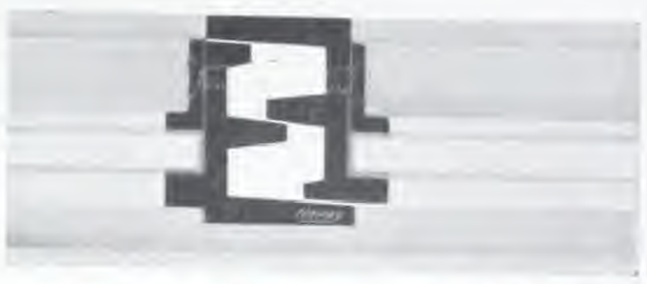


Z
Design
Section 1

Section A-B

Inside

Section C-D

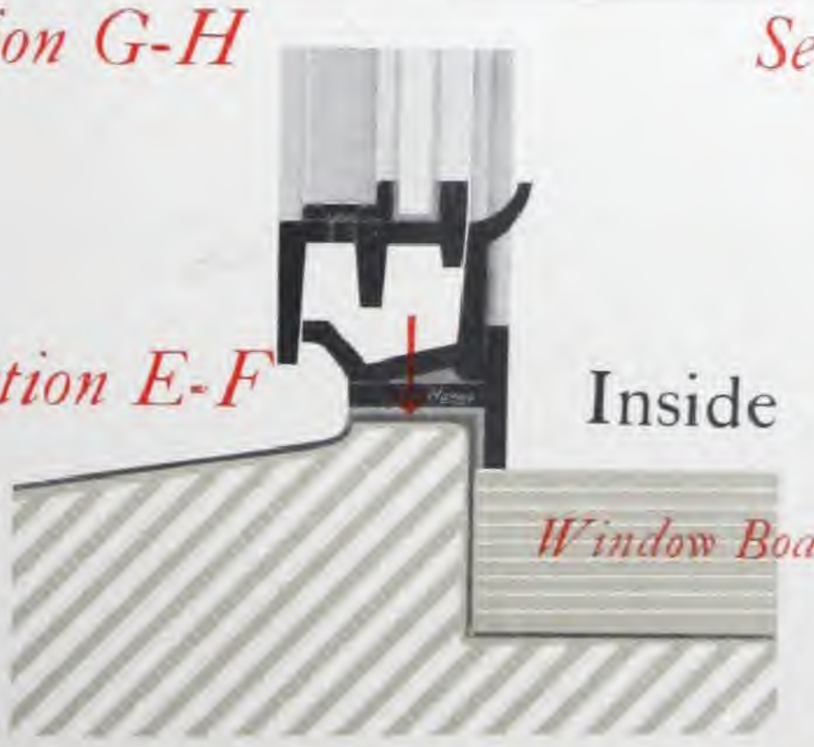


Section of meeting rail I-J if casements are made "folding" without mullion

Outside

Section G-H

Section I-J



Section E-F

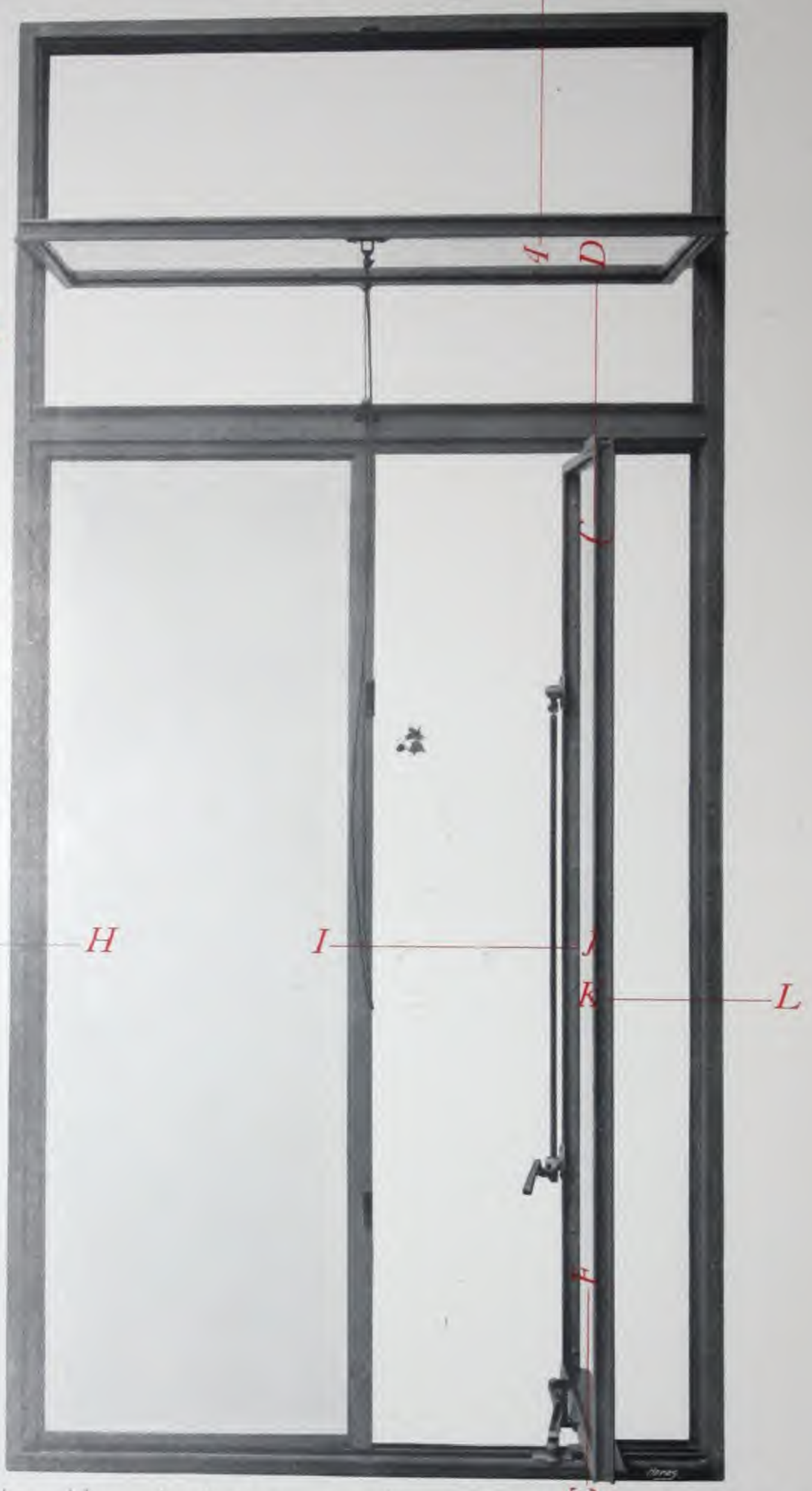
Inside

Dimensions for this type of window should be given in clear of opening as shewn by red arrows on the detail.

HOPE'S *Office Windows*

Y

Design
Section 4



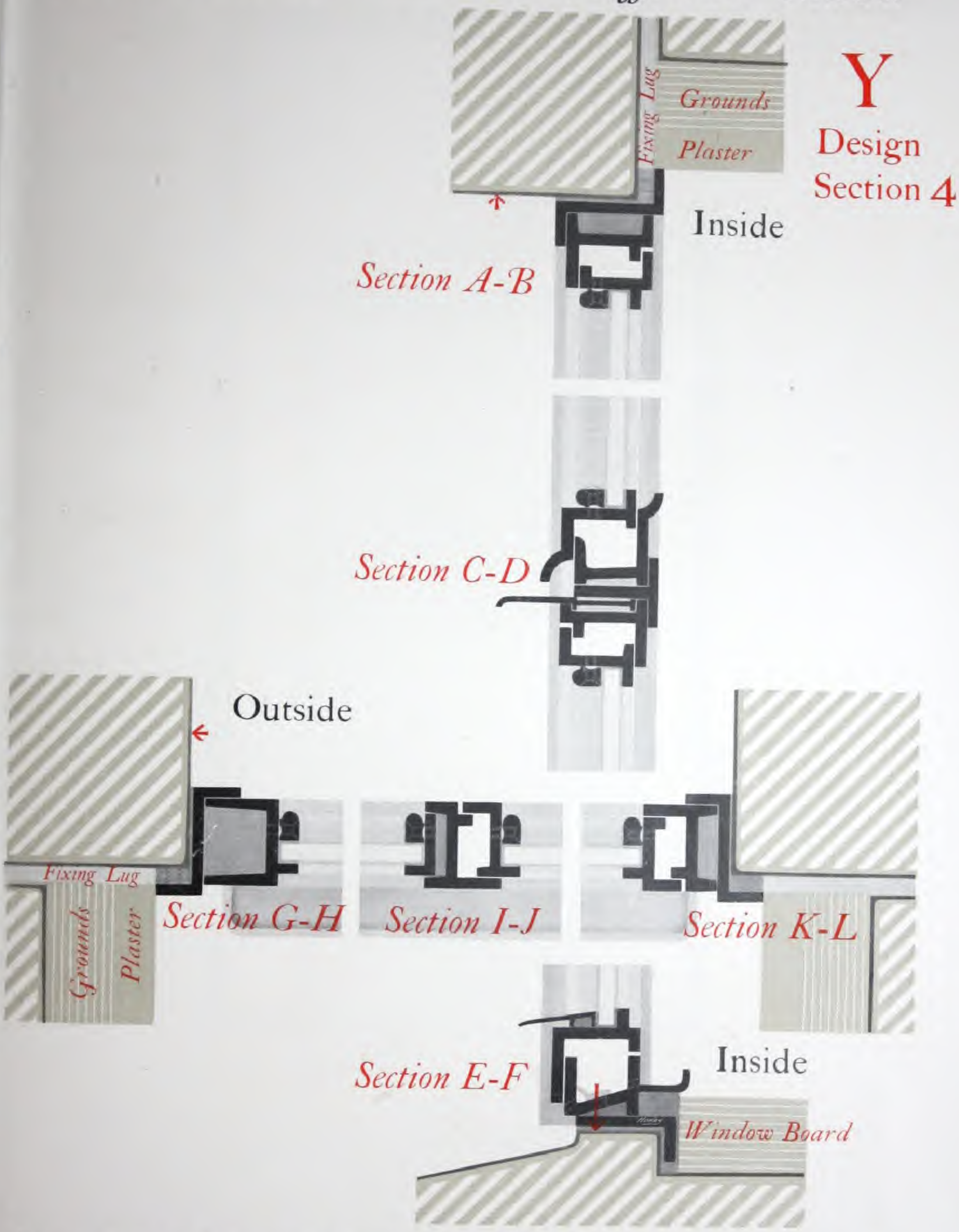
Hope's Office Window with one cleaning casement and one fixed light, and swinging casement above transome, Section 4, Quality 1, fitted with Double Grip Bolt, with Handle 497 on Plate 890, and Stay 223; Spring Catch and Pulley to transome light.

PRICES.

Y 1	As illustration, with Transome Light swinging - -	£9 4s.	each
Y 2	As illustration, but with Transome Light fixed - -	£7 14s.	,,
Y 3	As illustration, but with Transome Light hung at top -	£9 6s.	,,

The prices are for windows not exceeding 7 ft. 6 in. × 4 ft., including frame and glazing fillets.
For extra height add 5/- per 6 inches; for extra width, 1/6 per inch.
N.B.—Design Y is detailed in Section 4 because this Section is most suitable for the combinations given above.

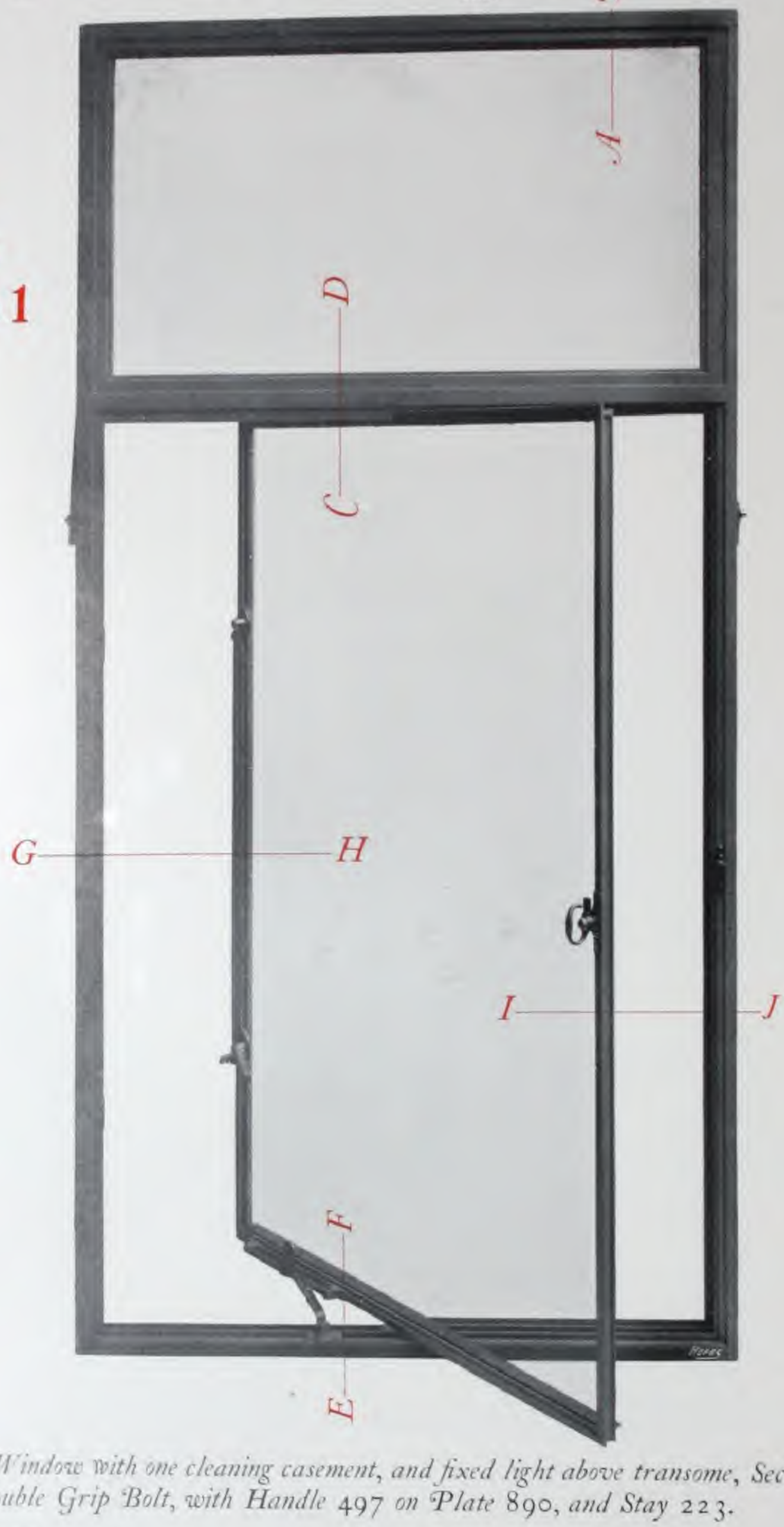
Half Full Size Details of Office Window



Dimensions for this type of window should be given in clear of opening as shewn by red arrows on the detail.

HOPE'S *Office Windows*

X
Design
Section 1



Hope's Office Window with one cleaning casement, and fixed light above transome, Section 1, *Quality* 1, *fitted with Double Grip Bolt, with Handle* 497 *on Plate* 890, *and Stay* 223.

PRICES.

X1	As illustration, with Transome Light fixed	- -	£7 10s. each
X2	As illustration, but with Transome Light hung at top	-	£9 10s. ,,
X3	As illustration, but with Transome Light swinging	-	£9 0s. ,,

The prices are for windows not exceeding 7 ft. 6 in. × 4 ft., including frame and glazing fillets.
For extra height add 6/- per 6 inches; for extra width, 1/6 per inch.
This window can be supplied in Section 4 at 10 per cent. less than the above prices.

Half Full Size Details of Office Window

X

Design
Section 1

Section A-B

Inside

Section C-D

Outside

Section G-H

Section I-J

Inside

Section E-F

Dimensions for this type of window should be given in clear of opening as shewn by red arrows on the detail.

HOPE'S *Office Windows*

W
Design
Section **1**

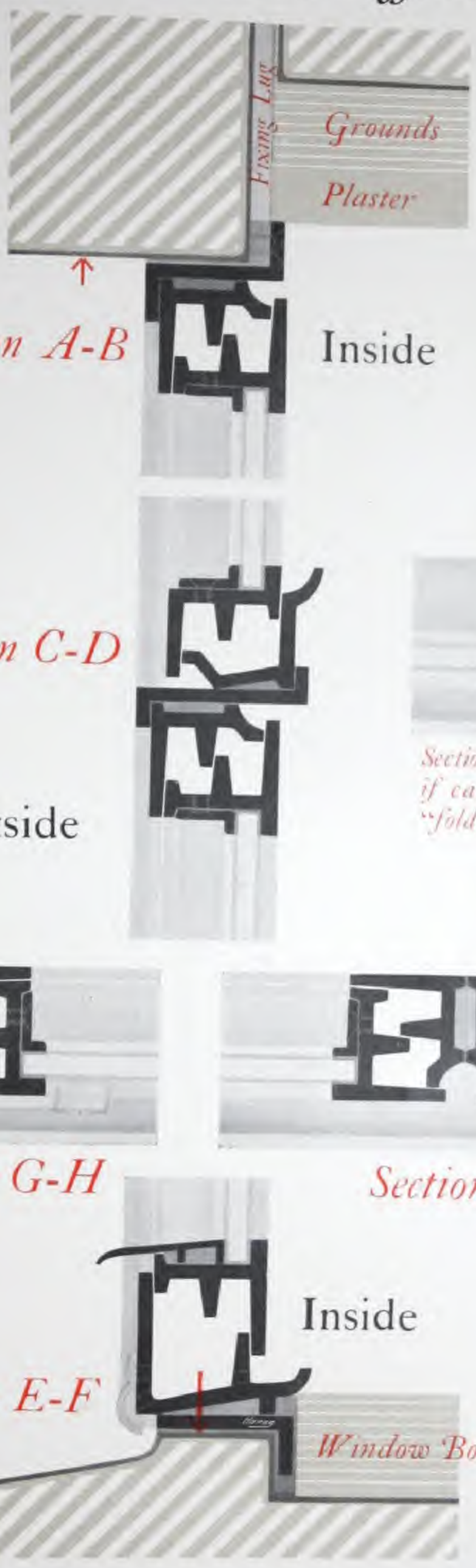
Hope's Office Window with two side hung casements and fixed mullion, and one bottom hung casement above transome, Section 1a, Quality 1, fitted with Double Grip Bolt, with Handle 963 on Plate 890, and Stay 223; Spring Catch and Patent Passable Side Arms to transome light.

PRICES. With or without Fixed Mullion

W 1 As illustration, with Transome Light hung at bottom - £12 10s. each
W 2 As illustration, but with Transome Light fixed - £10 10s. „

The prices are for windows not exceeding 7 ft. 6 in. × 4 ft., including frame and glazing fillets.
For extra height add 7/- per 6 inches; for extra width, 1/6 per inch.
This window can be supplied in Section 4 at 15 per cent. less than the above prices.

Half Full Size Details of Office Window

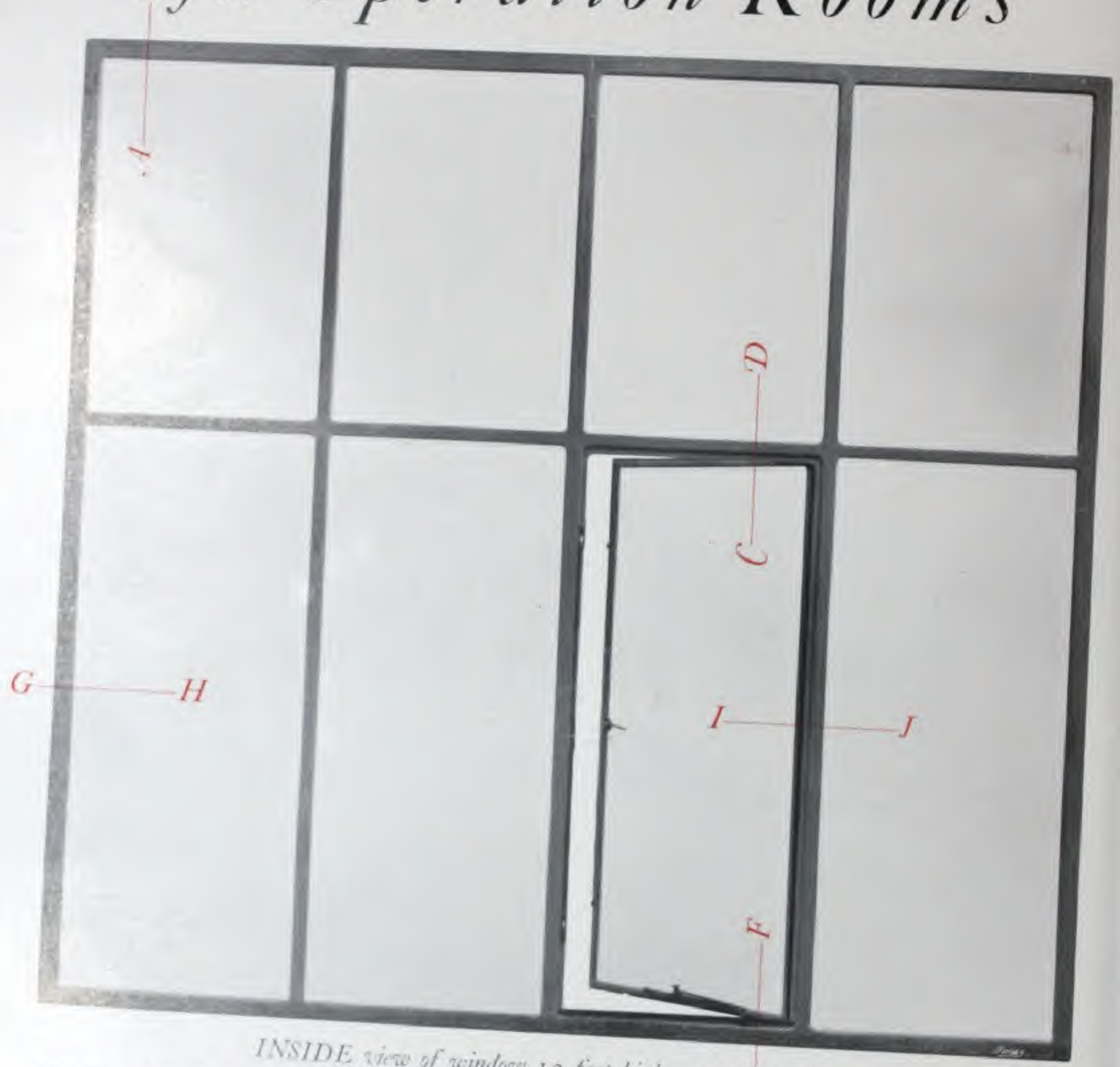


W
Design
Section **1**

Section of meeting rail I-J if casements are made "folding" without mullion

Dimensions for this type of window should be given in clear of opening as shewn by red arrows on the detail.

HOPE'S
Hospital Windows for Operation Rooms



INSIDE view of window 12 feet high × 13 feet wide.

SPECIFICATION

The frame is of steel with highly finished flat surfaces; all joints welded solid and the edges and internal angles rounded.

Our construction allows of very light sections of framing with large panes of glass. The opening casements are air-tight when closed, and by their large size allow for the immediate admission of a large volume of fresh air when required.

NOTE.—Our Hospital Windows have met with the unqualified approval of eminent surgeons in Great Britain and abroad. (See list on page 57).

Half Full Size Details of Window on Page 54

Section A-B

Outside

Section C-D

Section G-H

Section I-J

Section E-F

Inside

HOPE'S
Hospital Windows for Operation Rooms

One of the Operating Rooms, Royal Infirmary, Sheffield. Hadfield & Hadfield, Architects

HOPE'S *Windows for Hospital Wards*

This window has been designed for Hospital Wards, to take the place of wood sliding sashes, which have proved so unsatisfactory for Hospital buildings. The design of the window can be varied according to the requirements of climate.

List of Hospitals recently supplied with Hope's operation room windows:

Barnsley Infirmary.
Birmingham Eye Hospital.
Cardiff Infirmary.
Edinburgh: Victoria Hospital.
Glasgow Royal Infirmary.
Malvern General Hospital.
Sheffield Royal Infirmary.
Wandsworth Infirmary.
Montreal: Children's Hospital.
Toronto: Wellesley Hospital.
Waterbury, U.S.A.: General Hospital.

Several Military and Civil Hospitals in India and Burma for the Government of India.

The construction provides for setting the steel frame direct into the structure, leaving no hollow spaces for dirt, germs or vermin.

HOPE'S

Fireproof Doors and Partitions

Whiteley's Limited New Building, Queen's Road, Bayswater. John Belcher, R.A. / J. J. Joass } Architects

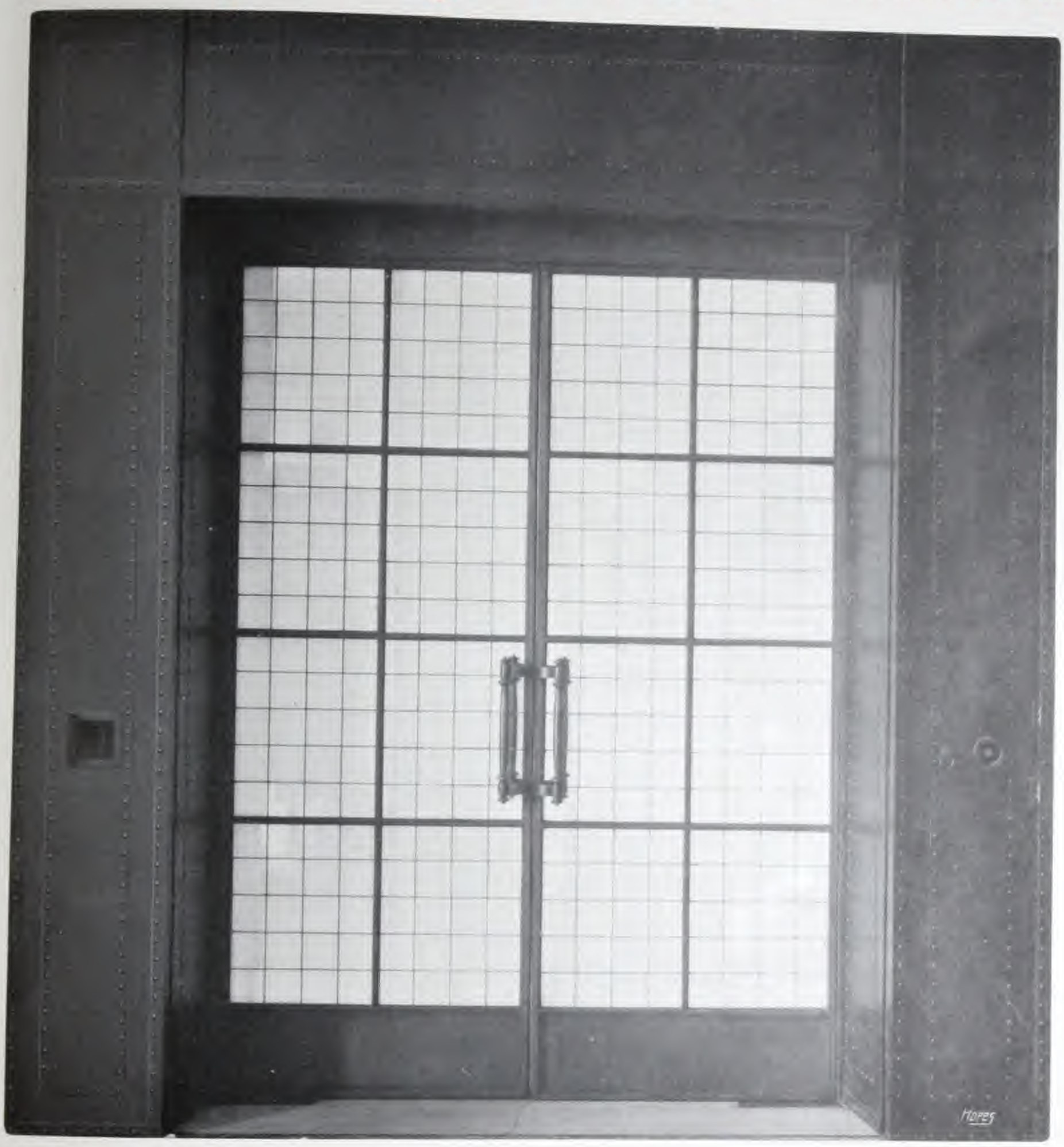
We supplied the Kupronized steel doors glazed with fireproof glass, also the steel shutter casings, as shewn in the above photograph.

NOTE.—We manufacture a very large variety of glazed steel doors, with either Kupronized or painted finish, also glazed casings and doors for elevator enclosures.

Details and prices on application.

HOPE'S

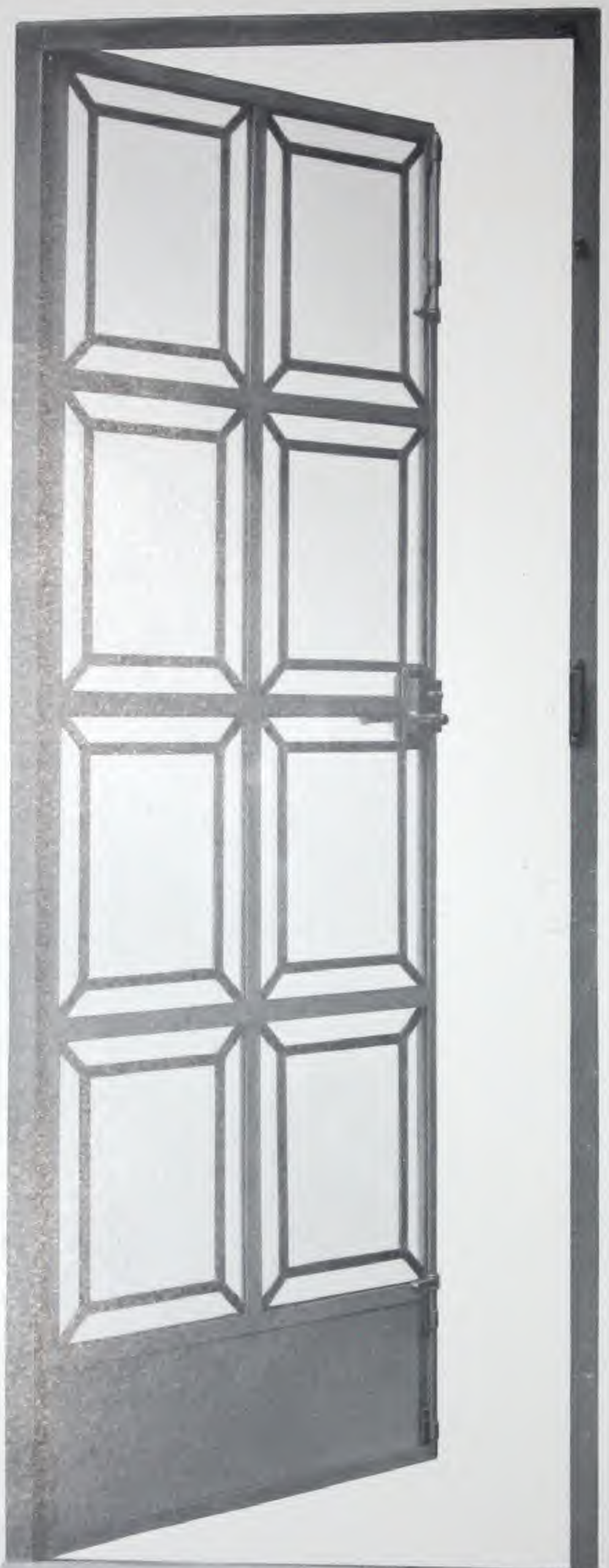
Fireproof Doors—*continued*



Another view of one pair of doors at Whiteley's Limited, shewing the steel casings for rolling shutters.

Details, drawings and estimates for fireproof glazed partitions, including shutters and casings, will be supplied on receipt of particulars.

HOPE'S *Casement Doors*



Single Door, Section 1, *opening outwards, fitted with Lock, with Handles on both sides (to lock from the inside only), and special bronze threshold.*

DETAIL *of* LOCK
Half full size.

SECTION *of* THRESHOLD
Half full size.

APPROXIMATE PRICES:

Single Doors, to open inwards or outwards, up to 7 ft. × 3 ft., £9 each.

Double Doors, folding in centre, without mullion, £19 each.

Prices include lock, bolts, kicking panel, ⊥ bars, glazing fillets, and bronze threshold, but no glass.

Disposition of ⊥ bars and design of glass may be varied to suit architects' requirements.

CASEMENT FITTINGS

Our "Standard" Fittings are made in two qualities, and are shewn on pages 64 to 67: Quality 1 is made of bronze metal and Quality 2 of iron.

"Standard" Bronze Fittings are made of an alloy of best selected copper, tin, and spelter, to the British Naval Specification.
The uniform colour and strength of our Bronze Castings are due to the purity of our alloy. No scrap or inferior metal is used in our foundry.

"Standard" Iron Fittings are, for the most part, of hand-forged wrought iron. We employ malleable iron of the best quality in a few patterns which do not lend themselves to forging, but all handle plates, stay brackets, etc., which are brazed or welded to the casements, are of charcoal iron or drop forged mild steel.
In design our "Standard" Fittings are appropriate and unpretentious; they are not mere variations of ornamental forms, but follow those lines which we believe to be mechanically correct.

N.B.—All "Standard" handles for outward opening casements are constructed on our patent Two-point system (see page 63).

Special Hand-forged Fittings. On pages 73 to 76 we illustrate a number of fittings of traditional character, and while these do not afford the same practical advantages of ease and variety of adjustment which are given by our "Standard" Fittings, they are thoroughly well made and are recommended as the best possible fittings of their class. The designs are either based upon old examples, or are produced in the same spirit.

This fitting shews the character of our hand-forged work.

NOTE.—The Fittings illustrated in this catalogue are only supplied with our metal casements. A special catalogue of Fittings for wooden casements will be sent on application.

HOPE'S

Patent Two-Point Handle

Architects will appreciate the fact that most casement stays are mechanically weak in the first quarter of the quadrant through which they operate, and that it is impossible for them to hold a casement open an inch or so for ventilation in gusty weather without the most irritating rattling. HOPE'S TWO-POINT HANDLE easily overcomes this difficulty, and not only holds the casement open one inch or one quarter inch as required, but holds it firmly at either of these two points. We make *no extra charge* for this device, and it is now applied to all our "Standard" Handles.

Illustration of Hope's Patent Two-Point Handle holding a casement open one quarter of an inch for ventilation.

Illustration of Hope's Patent Two-Point Handle holding a casement open one inch for ventilation.

SPECIFICATION
of "STANDARD" FITTINGS

Handles

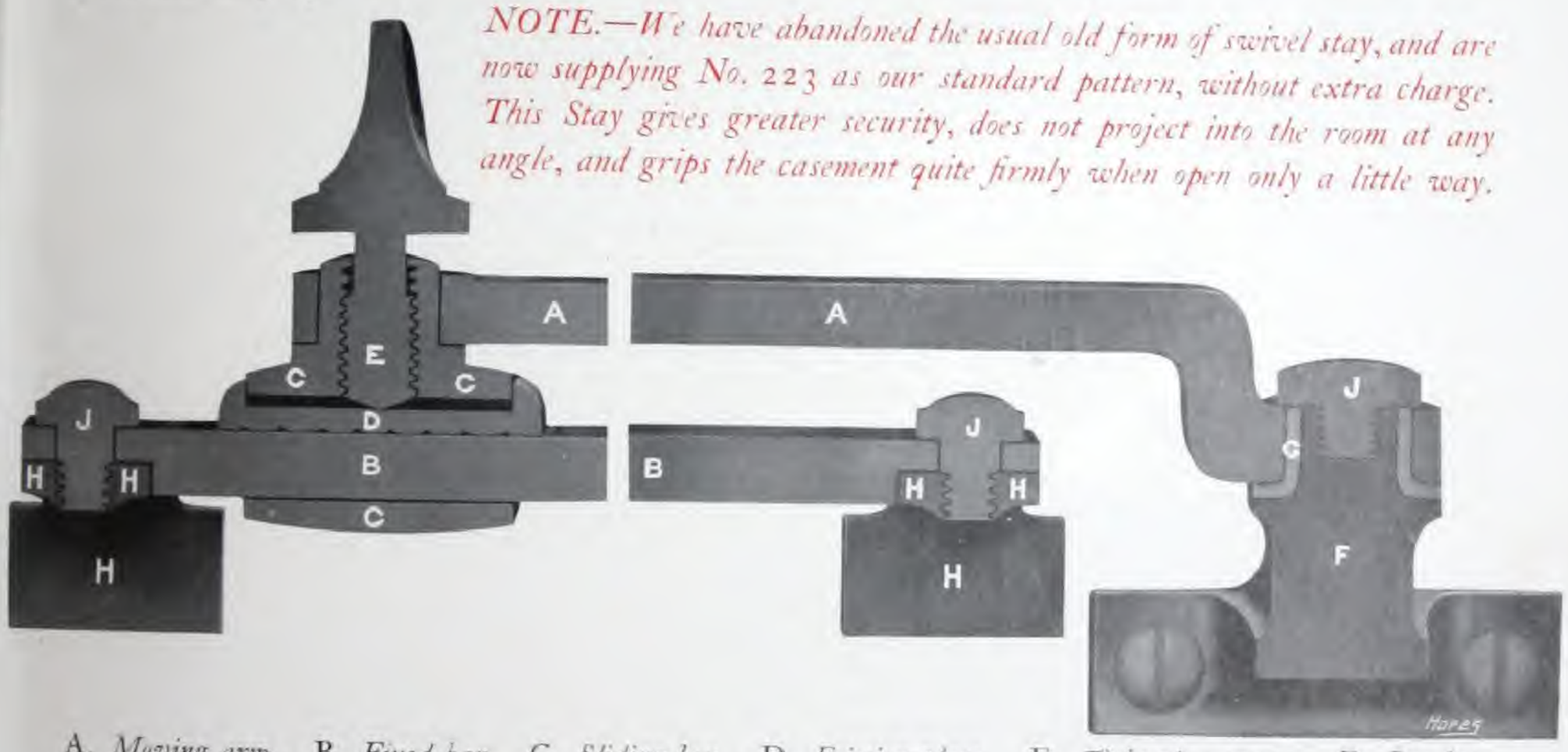
The handles are bored and faced on both sides, mounted on bronze pin (cast in one piece with the plate), and secured with cap and washer, which retain the handle at uniform pressure and prevent it getting loose with wear. All the parts are bored and turned to gauge. The quadrant and stop limit the movement of the handle to the one quarter of a circle which is necessary for opening and closing.

A. *Pin and plate in one casting.*
B. *Boss and nose of handle.*
C. *Hope's Patent Two-Point Extension.*
D. *Cap.* E. *Washer.* F. & G. *Stop and Quadrant.*

Stay No. 223

The box, screw, and friction plate are made of fine cast bronze, the bar and set screws of hard drawn bronze, the movable arm and bracket of best sherardized malleable iron. All joints and pins are of ample diameter and depth, bored and turned to a perfect fit. The screw is carefully turned and threaded to give a true central pressure upon the friction plate in tightening up.

NOTE.—We have abandoned the usual old form of swivel stay, and are now supplying No. 223 as our standard pattern, without extra charge. This Stay gives greater security, does not project into the room at any angle, and grips the casement quite firmly when open only a little way.



A. *Moving arm.* B. *Fixed bar.* C. *Sliding box.* D. *Friction plate.* E. *Tightening screw.* F. *Bracket.*
G. *Bronze bush.* H. *Casement brackets.* J. *Set pin.*

Peg Stays.

Fine cast bronze, the jaw and tongue machined to a perfect fit. The pins turned and the holes bored to the same taper, so that the stay drops easily on the pin, and holds the casement firmly. All provided with Hope's Combined Pin and Rest.

Bolts, etc.

All bolts, spring catches, etc., are made of the same quality of metal as our handles and stays, and are machined, fitted, and finished, in the same first class style.

HOPE'S *Standard Fittings*

BRONZE HANDLES (*Approximately half full size*)

Handle 577
Plate 890

Handle 1322
Plate 1325
Reg. No. 594813

Handle 497
Plate 1361
Reg. No. 594816

Handle 1393
Plate 1363
Reg. No. 594818

Handle 1323
Plate 1362
Reg. No. 594815

Handle 20a
Plate 1361
Reg. No. 594816

Handle 497
Plate 1325
Reg. No. 594813

Handle 963
Plate 212

Handle 962
Plate 208

NOTE.—All Handles and Plates on this page are included in the prices of Casements of Quality 1 *and* 1a. *See page 63 for specification.*

HOPE'S *Standard Fittings*

IRON HANDLES *(Approximately half full size)*

Handle 206
Plate 1361
Reg. No. 594816

Handle 963
Plate 212

Handle 577
Plate 890

Handle 497
Plate 1325
Reg. No. 594813

Handle 207
Plate 1363
Reg. No. 594818

Handle 208
Plate 208

Handle 206
Plate 207

NOTE.—All Handles and Plates on this page are included in the prices of Casements of Quality 2. *See page* 63 *for specification.*

HOPE'S *Standard Fittings*

BRONZE STAYS (*Approximately half full size*)

Peg Stay
1367

Reg. No. 594823

Peg Stay
218

Peg Stay
226

Peg Stay
219

Swivel Stay
223

Swivel Stay 223 is now our Standard fitting for both inward and outward opening casements of Quality 1 and 1a. It is a perfect piece of mechanism which does not project inside the room when in use, and holds the casement open quite rigidly at any angle. The movable arm and brackets are made of well finished sherardized iron, the remaining parts of solid bronze.

NOTE.—Stays for Casements of Quality 1*a are made entirely of bronze; and Casements of Quality* 1 *may be fitted with solid bronze stays at an extra cost of* 2/6 *each.* *See page* 63 *for specification.*

HOPE'S *Standard Fittings*

IRON STAYS *(Approximately half full size)*

Reg. No. 594823

Peg Stay
1367

Peg Stay
218

Peg Stay
226

Peg Stay
219

Peg Stay
384

Peg Stay
385

NOTE.—All Peg Stays on pages 66 *and* 67 *are provided with our registered pattern of combined pin and rest. (Reg. No.* 410530*).*

HOPE'S

Double and Treble-Grip Bolts

No. 1 No. 2 No. 3

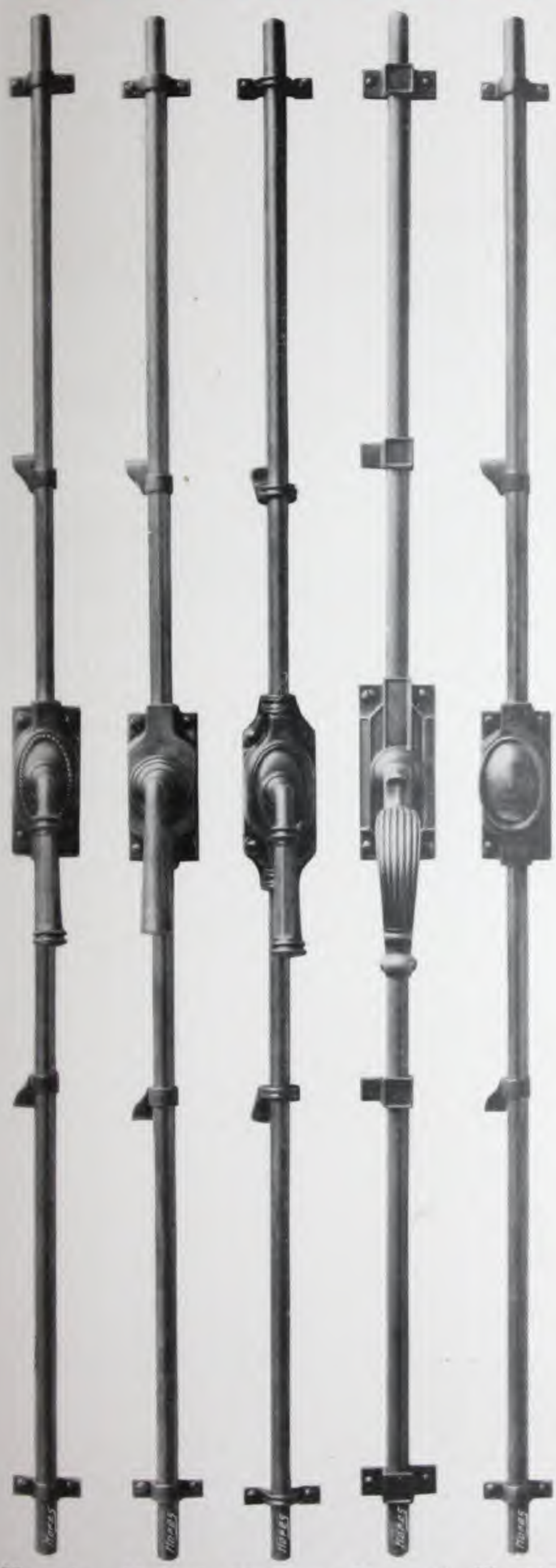
No. 1 is our Double Grip Sliding Bolt, as applied to outward opening casements (with frames) over 5 ft. high, for Sections 1, 1c and 5, and over 4 ft. 6 in. high for Sections 2, 4 and 4c. The handle is usually placed about 15 in. above the sill. The photograph shews the bolt fixed to Section 2.

No. 2 is our Treble Grip Bolt. This is only applied to exceptionally large casements when it is more convenient for the handle to be in the centre of the casement.

No. 3 is our Double Grip Sliding Bolt, as applied to inward opening casements (with frames) of Sections 1a, 2a and 4a. The photograph shews the bolt fixed to Section 2a.

NOTE—These Bolts are included in the prices of Casements where specified.

HOPE'S
CREMORNE BOLTS



No.1169 No.918 No.1170 No.1398 No.917

These bolts are fitted to all French Casements (without mullion) over 4ft. 6in. high. They have stout round rods of drawn bronze, with case, handle & guides of fine cast bronze, finished to a nut brown tone or polished bright.
The cost is included in the price of casements on pages 11 & 15.

HOPE'S
TRANSOME FITTINGS

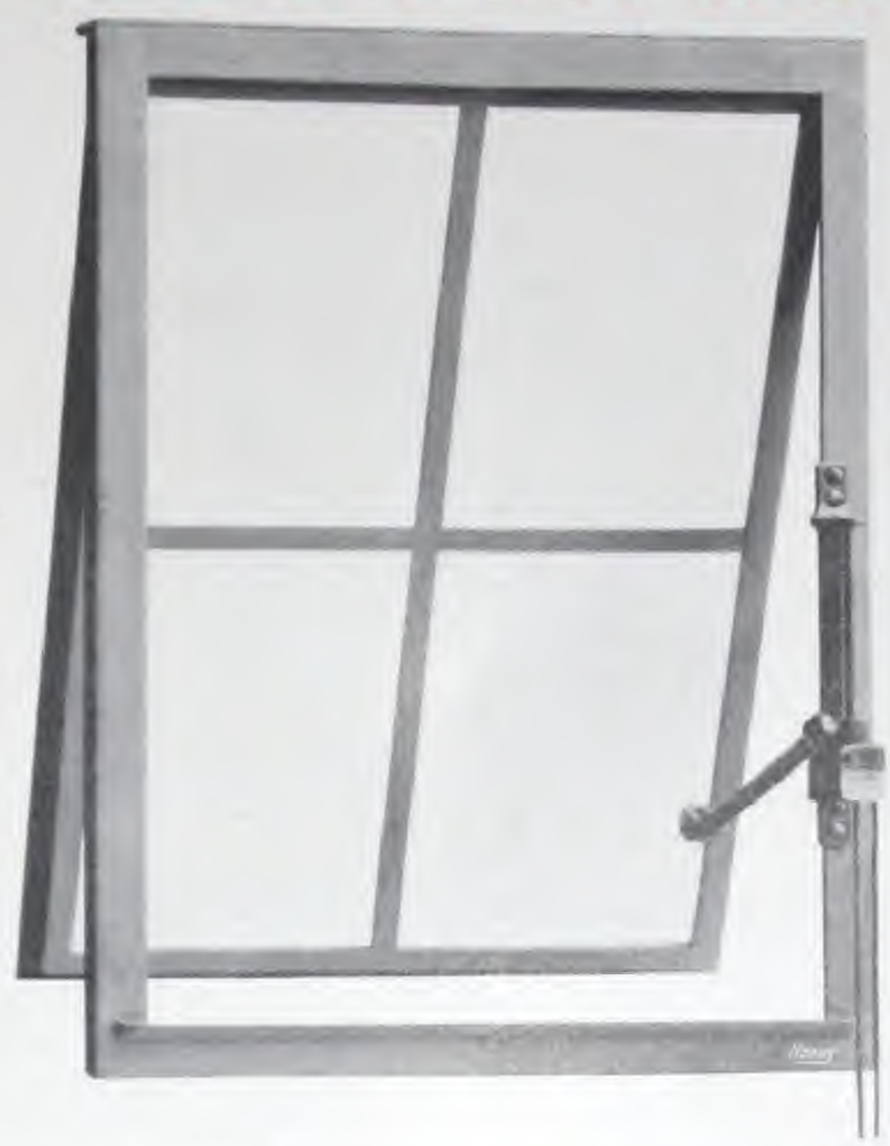
HOPE'S No. 727 OPENER

Operated by hand or window stick. Opens the casement one distance only; maximum opening, 9" projection from inside face of frame, 4¼" when closed.

HOPE'S PASSABLE SIDE ARMS No. 1360 (Patent No. 11727)

Perfectly safe in action. No movable parts. Right hand photograph shews one arm released and raised for lowering casement for cleaning.

TRANSOME FITTINGS



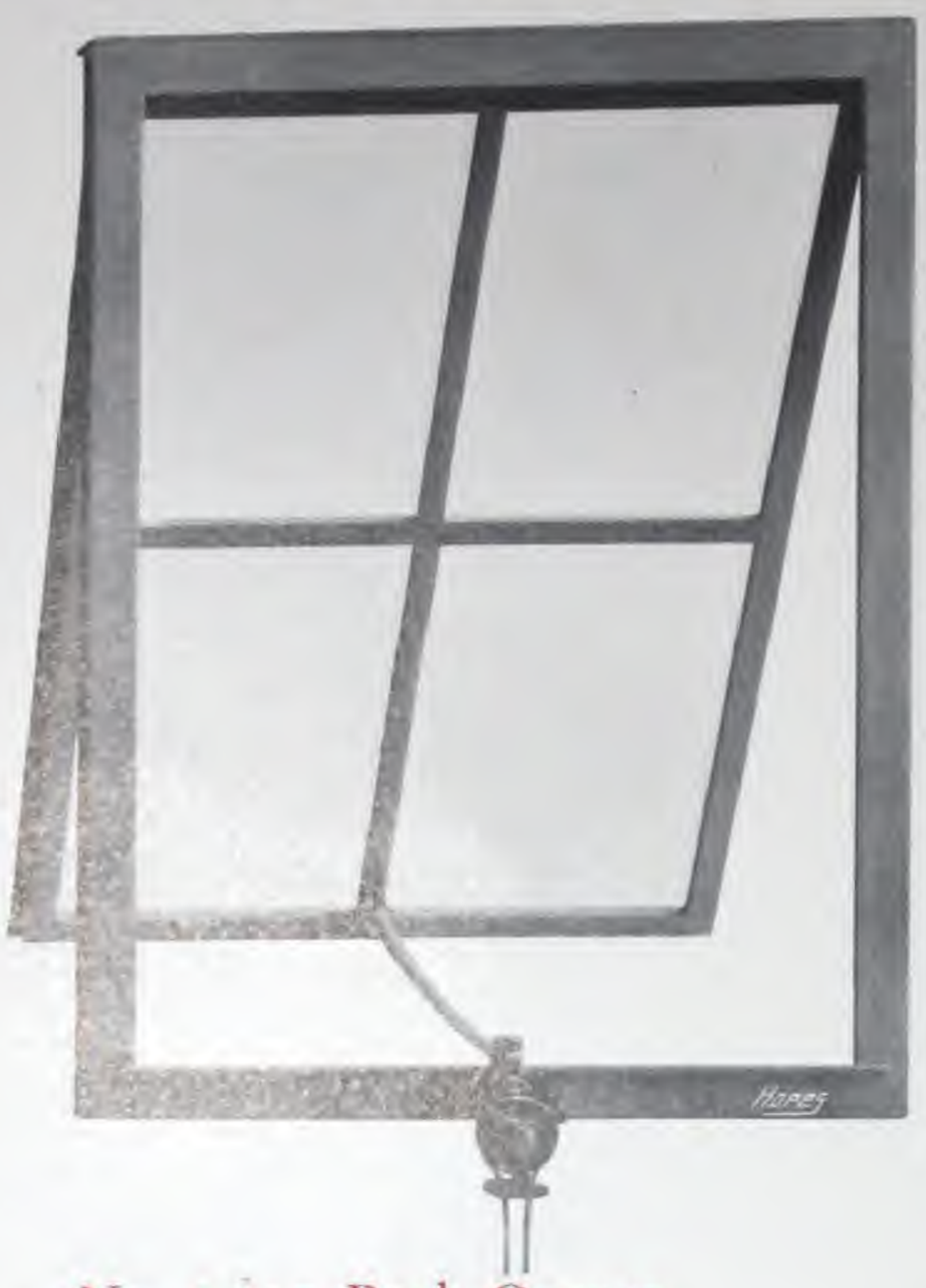
HOPE'S No. 502 OPENER

Operated with cord, and suitable for casements not exceeding 1ft. 6in. wide. Does not project from inside face of frame more than 2⅛ inches in any position. Maximum opening, 6½ inches.

HOPE'S "CAM" OPENER No. 506 (Patent No. 4737)

Operated by hand or window stick. Casement may be set open at one, two or three distances according to length of arm. Projection from inside face of frame, 1¾ inches when closed. When ordering state maximum opening required.

HOPE'S *Cord Openers*



No. 1357 Rack Opener.

No. 2 opens 10". Iron 2/9; bronze 3/9 ea.
For casements up to 2 ft. sq.

No. 6 opens 15". Iron 3/9; bronze 5/9 ea.
For casements up to 3 ft. sq.

No. 8 opens 18". Iron 7/6; bronze 16/3 „
For large heavy windows.

No. 1358 Twin Screw Opener.

Maximum opening = $\frac{2}{3}$ths of width of casement. Projection from inside face of frame, 2 inches.
Made in bronze only.
18" wide - - 20/- each.
Extra widths - 1/- per inch extra.

These two fittings can be varied for casements hung at bottom or to swing, in addition to hung at top as shewn above.

NOTE.
The three fittings shewn on this page are applicable to any transome casement in the catalogue, but are not included in the prices. They may be fitted to any casement by adding the casement price of quality 2.

No. 1359 Opener.

Suitable for light swinging casements only.
Maximum opening, 8 inches, projection from face of frame, $3\frac{1}{2}$ inches.
Made in bronze only, 6/- each.

HOPE'S

Wrought Iron Fasteners

Made of charcoal iron, hand forged and finished black or bright.
The prices given must be added to the list prices of Casements of Quality 1.
Approximately half full size.

Fastener 1337. 3/9 each.
Reg. No. 594822

Fastener 1381. 4/6 each.
Reg. No. 594820

Fastener 209. 2/- each.
Reg. No. 594814

Fastener 1379. 3/9 each.
Reg. No. 594819

Fastener 1380. 4/6 each.
Reg. No. 594821

Fastener 1382. 7/6 each. (From Ludstone Hall, Salop).

When these Fasteners are used we supply a simple hand forged Peg Stay of suitable design.

HOPE'S

Wrought Iron Fasteners

Made of charcoal iron, hand forged and finished black or bright.
The prices given must be added to the list prices of Casements of Quality 1.
Approximately half full size.

Fastener 1326. 7/6 each.
Reg. No. 594817

Fastener 1325. 3/9 each.
Reg. No. 594824

Latch Fastener 1383. 12/6 each.

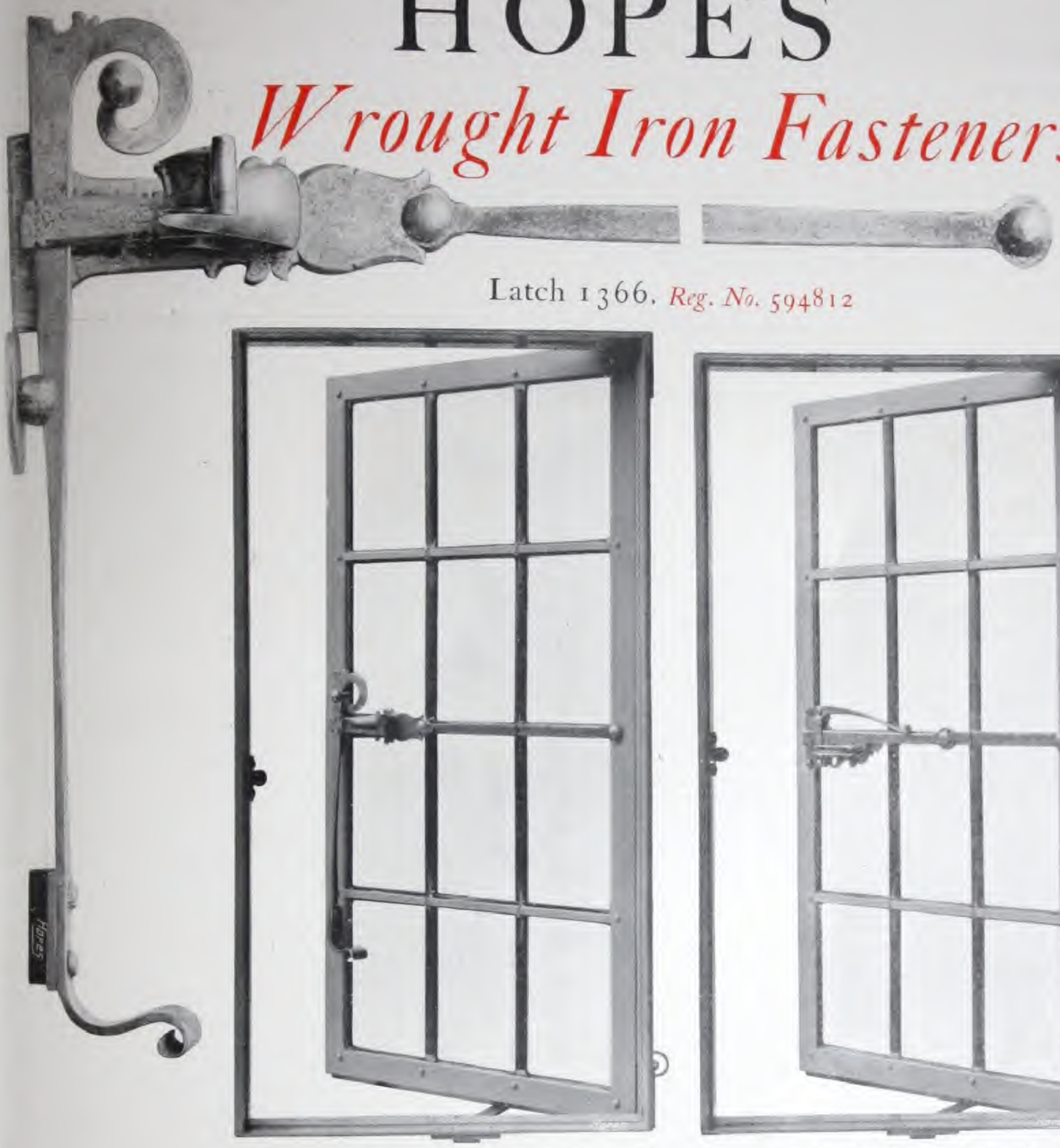
Fastener 1384. 12/- each.

Fastener 1324. 8/6 each.

When these Fasteners are used we supply a simple hand forged Peg Stay of suitable design.

HOPE'S

Wrought Iron Fasteners



Latch 1366. *Reg. No.* 594812

Casement fitted with Latch 1366 *and Spring Quadrant.*

Casement fitted with Latch 1385 *and Spring Quadrant.*

Latch 1385. *Reg. No.* 594811

Made of charcoal iron, hand forged and finished black or bright.

Both these Latches are self locking, i.e., they require no manipulation of the latch when being closed. The Quadrant is a spring upon which the casement takes its bearing; the top of quadrant is tinned and a bronze friction piece is brazed into the bottom of casement to give a rustless contact.

PRICES are extra to the list prices of Casements, Quality 1.

Latch No. 1366, 12/6 each extra. Latch No. 1385, 12/6 each extra.

Quadrant, 3/- each extra.

HOPE'S *Wrought Iron Fasteners*

Approximately half full size.

LATCH No. 1365.

Made of charcoal iron, hand forged and finished black or bright.

This Latch is self locking, *i.e.*, it requires no manipulation of the latch when being closed.

The Quadrant is a spring upon which the casement takes its bearing. The top of the quadrant is tinned and a bronze friction piece is brazed into the bottom of casement to give a rustless contact.

PRICES are extra to the list prices of Casements, Quality 1.

Double Latch		30/-	ea.	extra.
Single	,,	16/6	,,	,,
Quadrant -		3/-	,,	,,

Casement fitted with Latch 1365.

From an old example.

Instructions for Fixing Casements

I. Care must be taken to set the casement and frame quite square in the opening, and on no account must any force be used in putting it in. If the opening is not large enough, the stone or wood work must be eased so that the casement will go in easily.

II. In stone or terra-cotta, round holes should be carefully cut exactly opposite the holes in the steel frame. These holes should then be plugged with round lead plugs A of the right size.

III. The frame must be well bedded to the rebates with mastic.

IV. Carefully screw the frame to the lead plugs and take care not to distort or twist it in screwing up. Any distortion or twisting of the frame will shew itself by the imperfect fit of the casement when gently closed, and such distortion should be corrected by loosening the fixing screws, packing or wedging the frame to its correct position where necessary, and re-screwing up.

V. In wood frames, the above instructions hold good with the exception that lead plugs are not required.

Instructions for Glazing Casements

I. A quick, hard setting, stiff putty must always be used for metal windows. Ordinary glazier's putty must *not* be used, as this will never set hard on metal.

II. Before putting in glass take note that the casement opens and closes perfectly.

III. The glass must be bedded in the usual way and front puttied, but the putty should be left at least 14 days before painting so as to allow it time to set. If the front putty is painted before it is hard it will remain soft and is always liable to "run." Front putty should be kept as narrow as possible; a wide splay of putty increases the liability to "run" and makes a slovenly job.

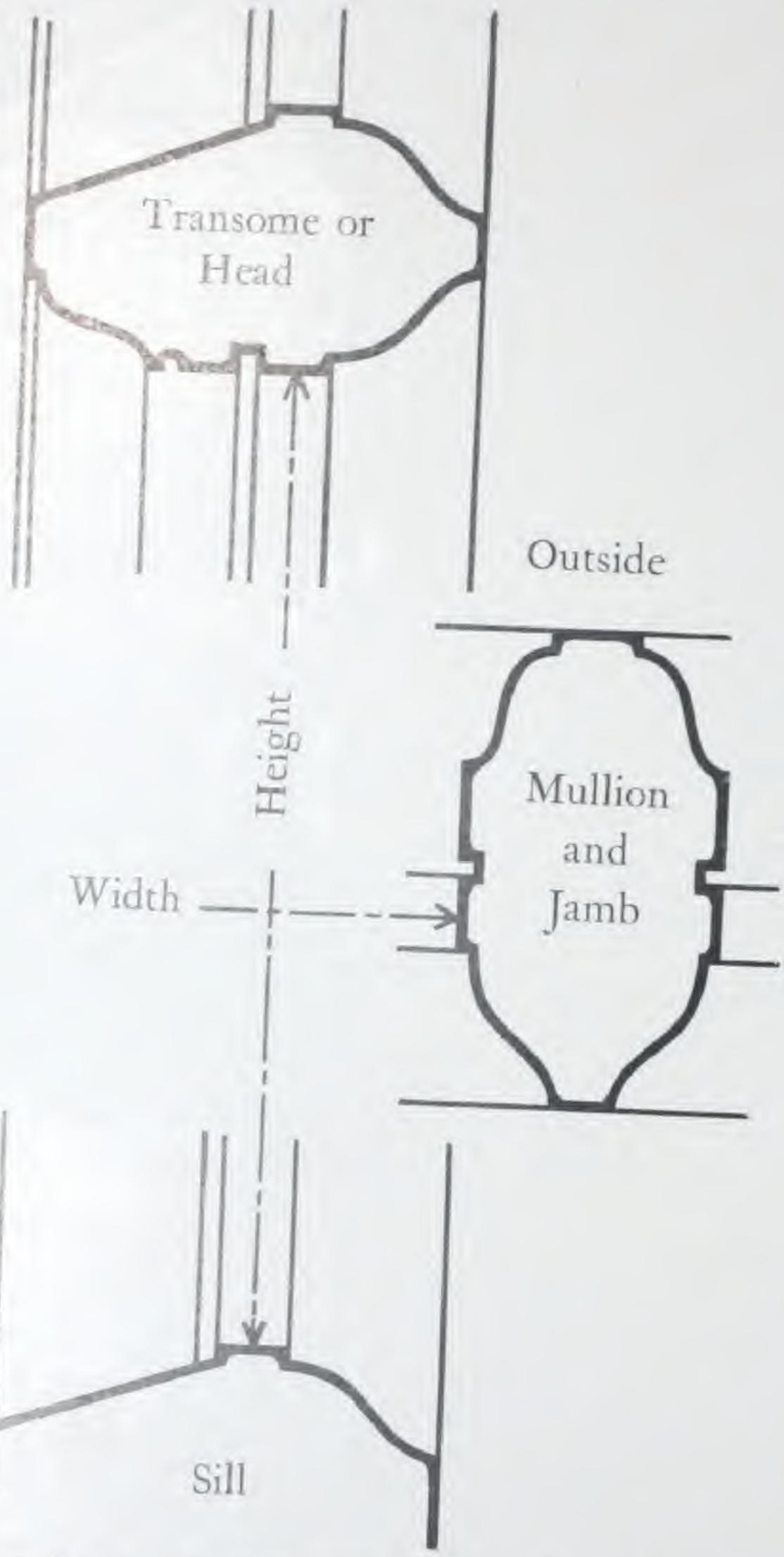
IV. In putting in glass it is always of the utmost importance to wedge it at the points C and D (the wedge C should be inserted first). This is necessary to prevent the casement sagging with the weight of the glass.

Glazing Fillets For casements glazed with single sheets of plate glass and for all large casements we strongly recommend our metal glazing fillets B, which make a much better looking and more substantial finish than the usual front putty. The price of these fillets is given in the price lists of each of our Sections.

Warning In no case should casements be fixed until the building is clear of the rougher trades. Where it is desirable to protect floors and plastering, canvas screens can be placed against the window frames at a very small cost. If casements and glazing are put in soon enough to effect this purpose they are certain to be damaged.

THE FOLLOWING PARTICULARS SHOULD ACCOMPANY AN ORDER *for* CASEMENTS IN *GROOVED* WORK

1. Exact height and width as shewn on these details.
2. Full size sections of heads, jambs and sills.
3. Which hand to be hung, looking from INSIDE.
4. What glass is to be used.
5. The Section and quality required.

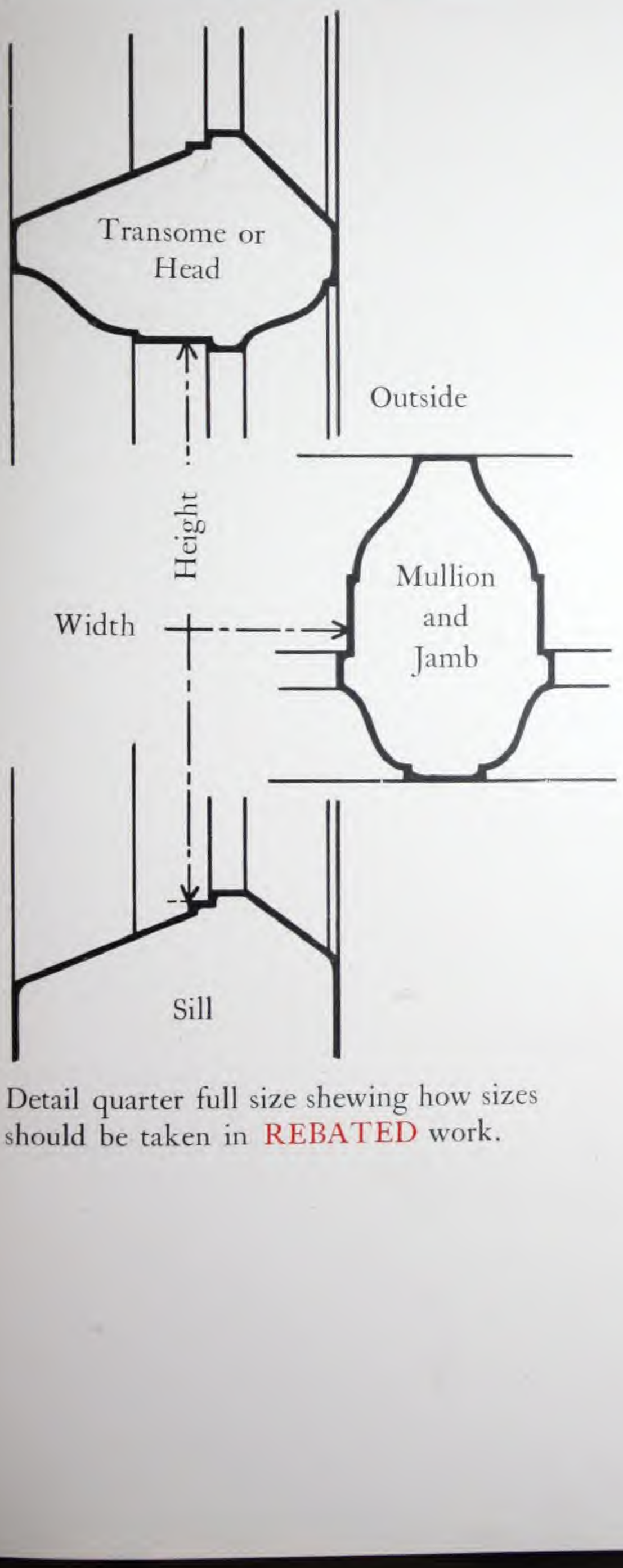


Detail quarter full size shewing how sizes should be taken in GROOVED work.

A RIGHT-HAND Casement, shewing hinges on the right-hand side looking from the inside.

THE FOLLOWING PARTICULARS SHOULD ACCOMPANY AN ORDER *for* CASEMENTS IN *REBATED* WORK

1. Exact height and width as shewn on these details.
2. Full size sections of heads, jambs and sills.
3. Which hand to be hung, looking from INSIDE.
4. What glass is to be used.
5. The Section and quality required.



Detail quarter full size shewing how sizes should be taken in REBATED work.

A LEFT-HAND Casement, shewing hinges on the left-hand side, looking from the inside.

N.B.—The hand of casement is always on the side of the hinges, looking from the INSIDE, whether the casement opens in or out.

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HOPE'S *Leaded Glass*

South Wraxall Manor, Wiltshire

THE architectural value of leaded lights in plain squares is well shewn in the above illustration; without the lead cames, the window openings would be barren and ugly; any additional ornament would be superfluous; but plain squares are exactly right and take a proper place in the general scheme. It is certain that for the majority of buildings plain square glazing is the only satisfactory treatment, but to obtain the best results it is necessary to determine

the pane unit and its proportion before designing the window opening, by which means the proportion of the openings above and below transome, will always bear a proper relation to the smaller units of the leaded glass, and to each other. The proper thickness of the lead cames will be influenced by the scale and design of the building itself, and the quality of the glass will also be affected by the same conditions, but, speaking generally, unflattened crown glass should be used wherever possible. The play of light on the convex surfaces (seen from the outside) is essentially glass like and altogether charming.

For positions where ornamental glazing is desirable, a small amount of concentrated pattern work, as shewn in designs Nos. 17 & 18, is often highly effective, while simple geometrical patterns such as Nos. 10 to 16 provide a sound basis for schemes of glazing which require a more general emphasis.

Colour may be used in any of the ornamental designs which we illustrate, and we are always pleased to submit colour schemes for all classes of stained and leaded glass, together with samples of the glass intended to be used. We have a large stock of beautiful Antique glass, Norman slabs, etc., from delicate to rich deep tones, also a stock of genuine unflattened old English crown glass, old Dutch glass, and other glass taken from old buildings.

In preparing designs we prefer to have a rough copy of the plans and elevations of proposed buildings, or photographs of existing buildings, so that we may give a design in harmony with the general scheme.

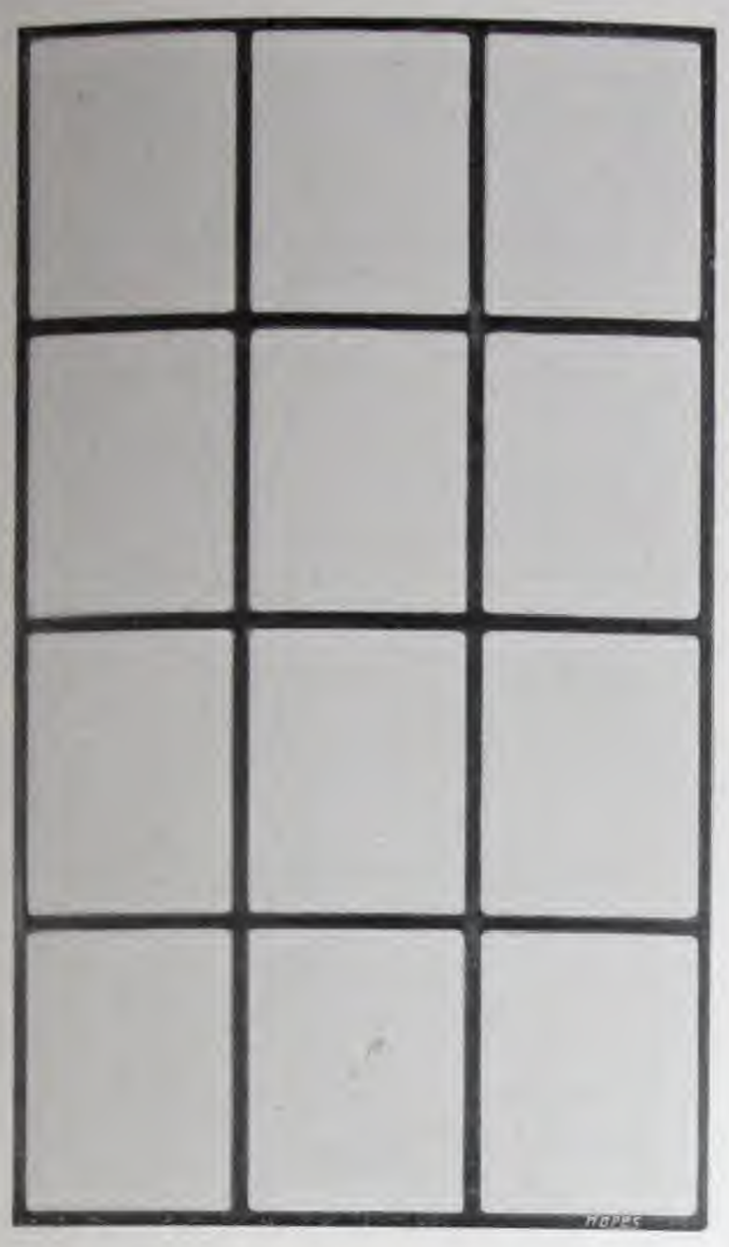
PRICES for plain work:

Plain Squares in Strong Leads and 21-oz. sheet glass,		1/1	per square foot.
,, ,, ,, ,,	and unflattened crown,	2/-	,, ,,
,, ,, ,, ,,	patent plate - -	2/-	,, ,,

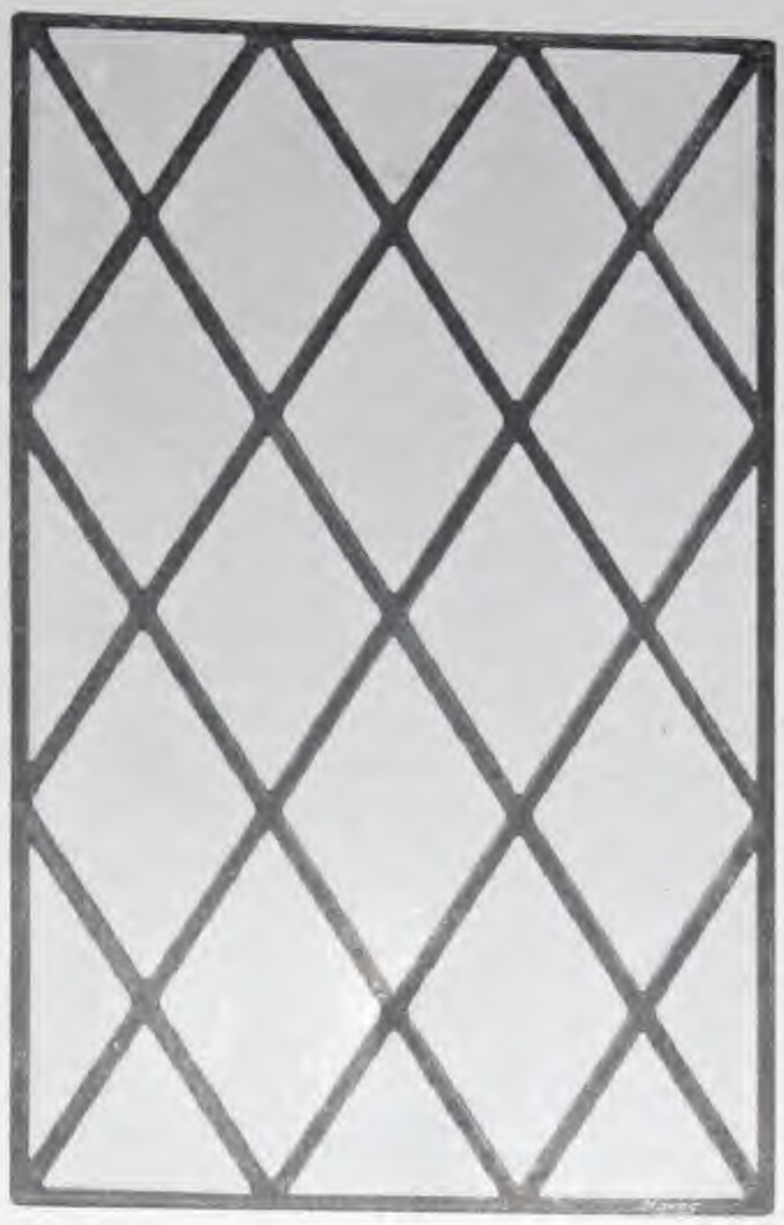
For diamond panes add 3d. per square foot.

Fixing leaded lights, 4d. per sq. ft., including setting saddle bars and bedding and painting in mastic.

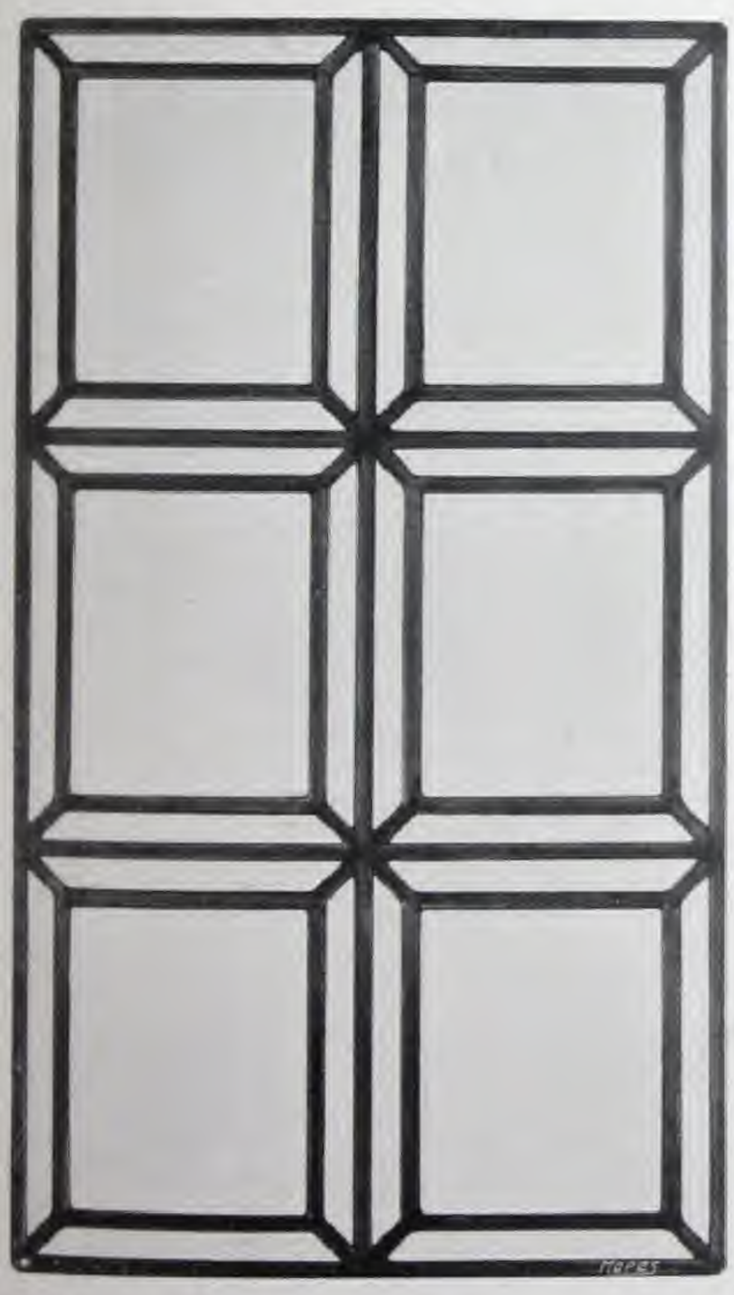
NOTE.—The prices attached to each of the ornamental designs on pages 83 to 86 are for work carried out in plain 21-oz. sheet glass. For higher quality or coloured glass, special quotations and samples will be given.
The width of lead cames should be specified when ordering.



No. 1. 1/1 per sq. ft.

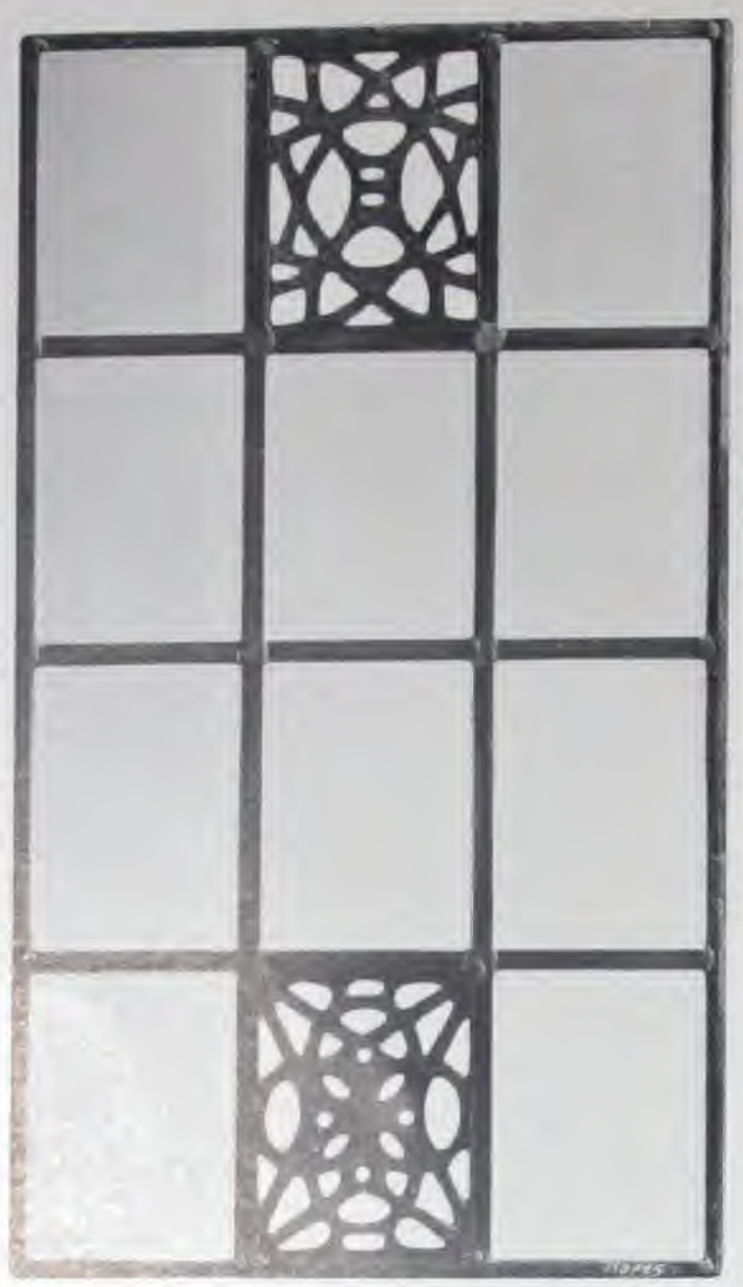


No. 2. 1/4 per sq. ft.

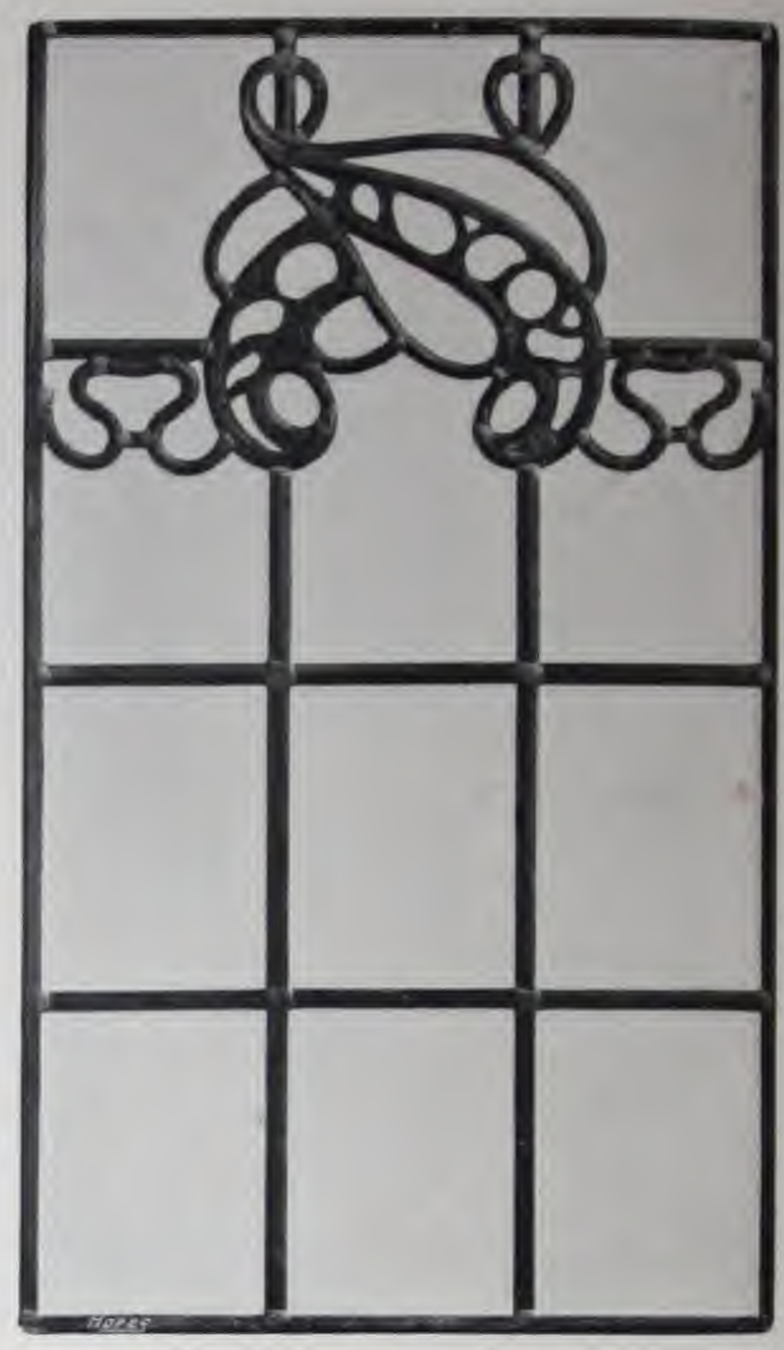


No. 3. 2/- per sq. ft.

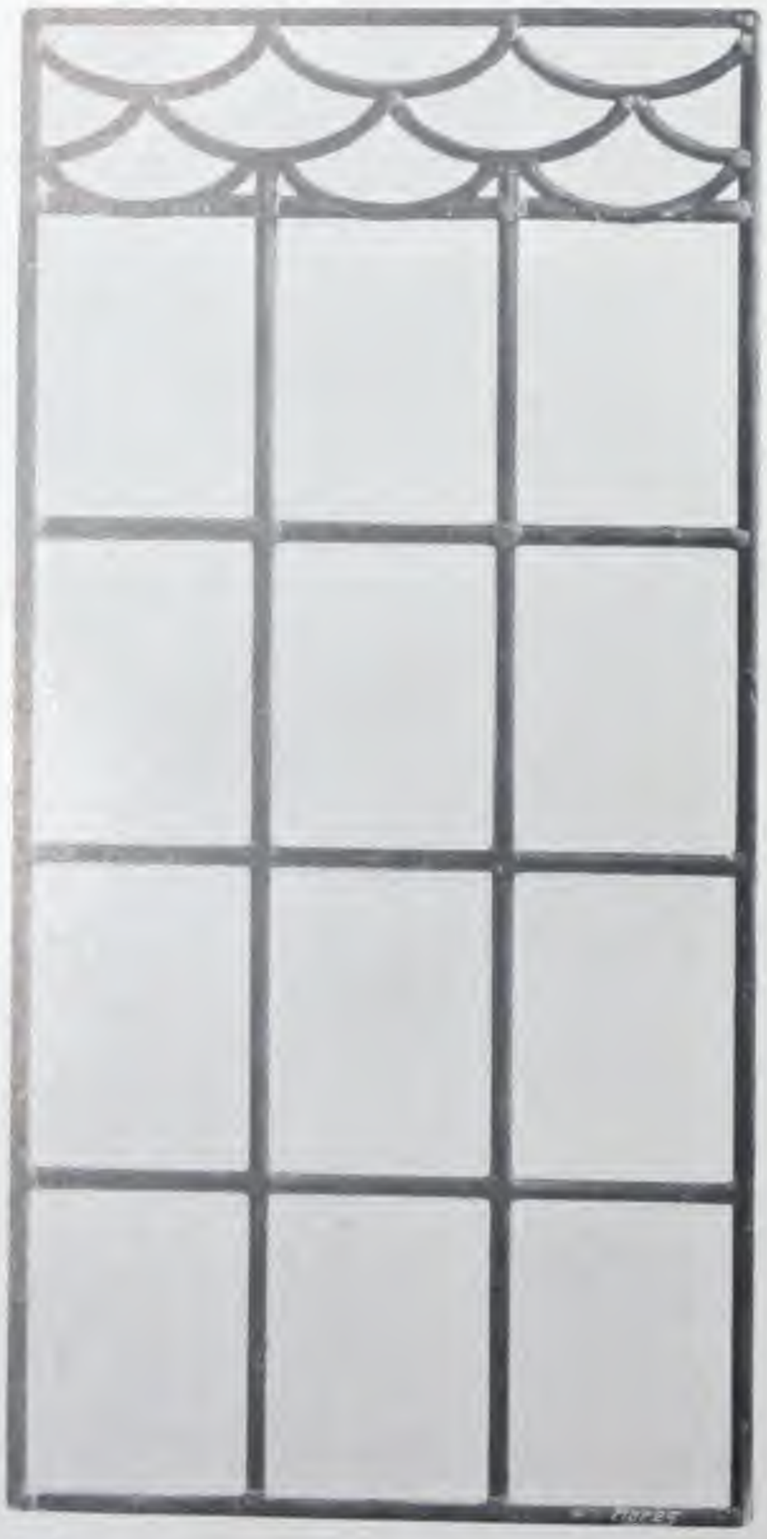
No. 4. 2/- per sq. ft.



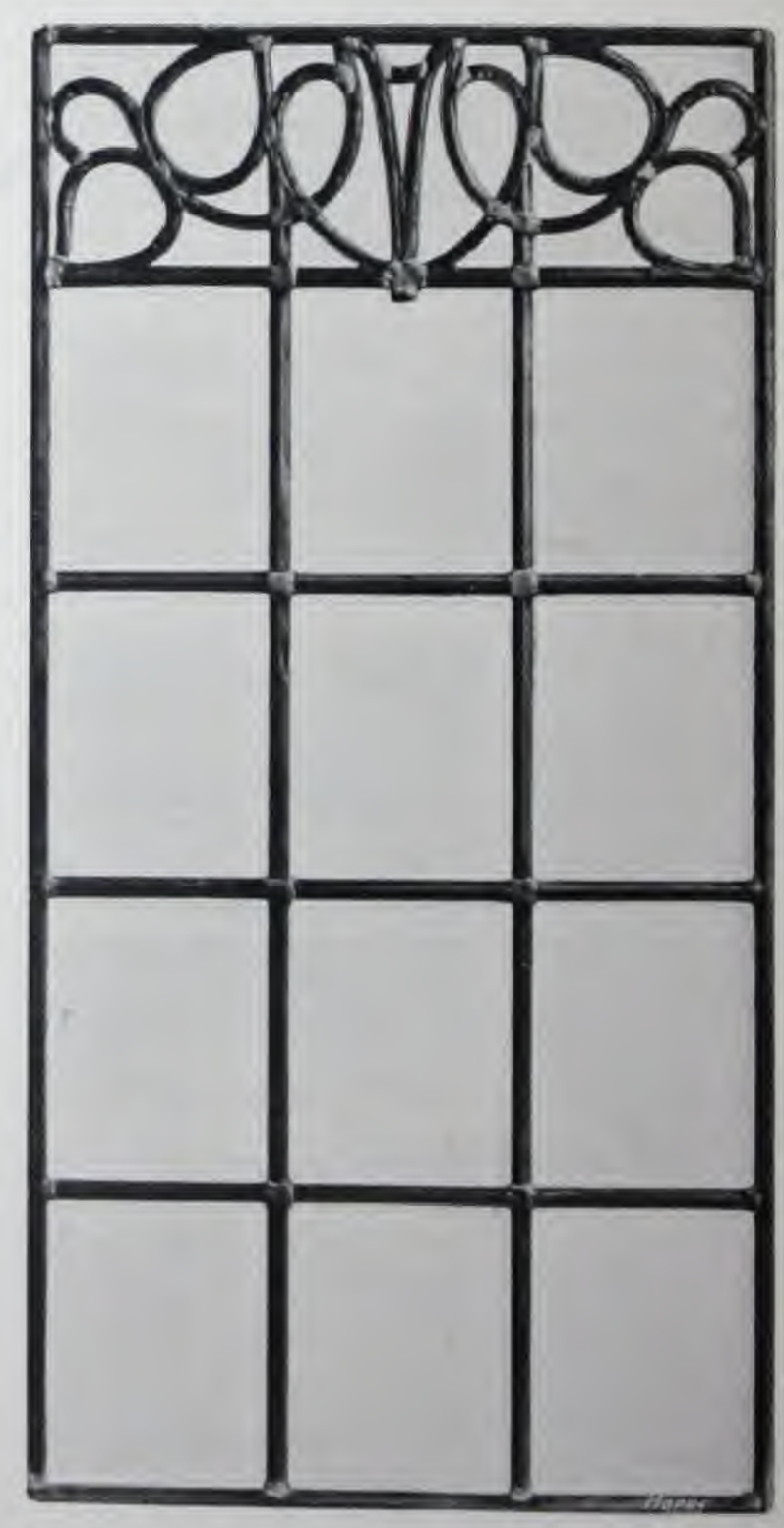
No. 5. Ventilating Panels, 2/6 each.



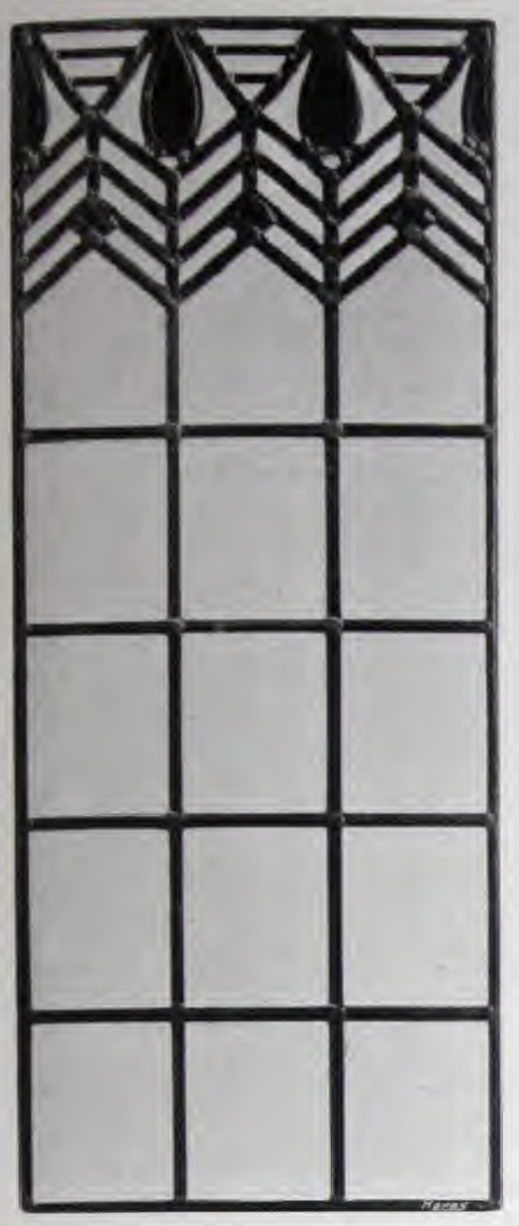
No. 6. 2/9 per sq. ft.



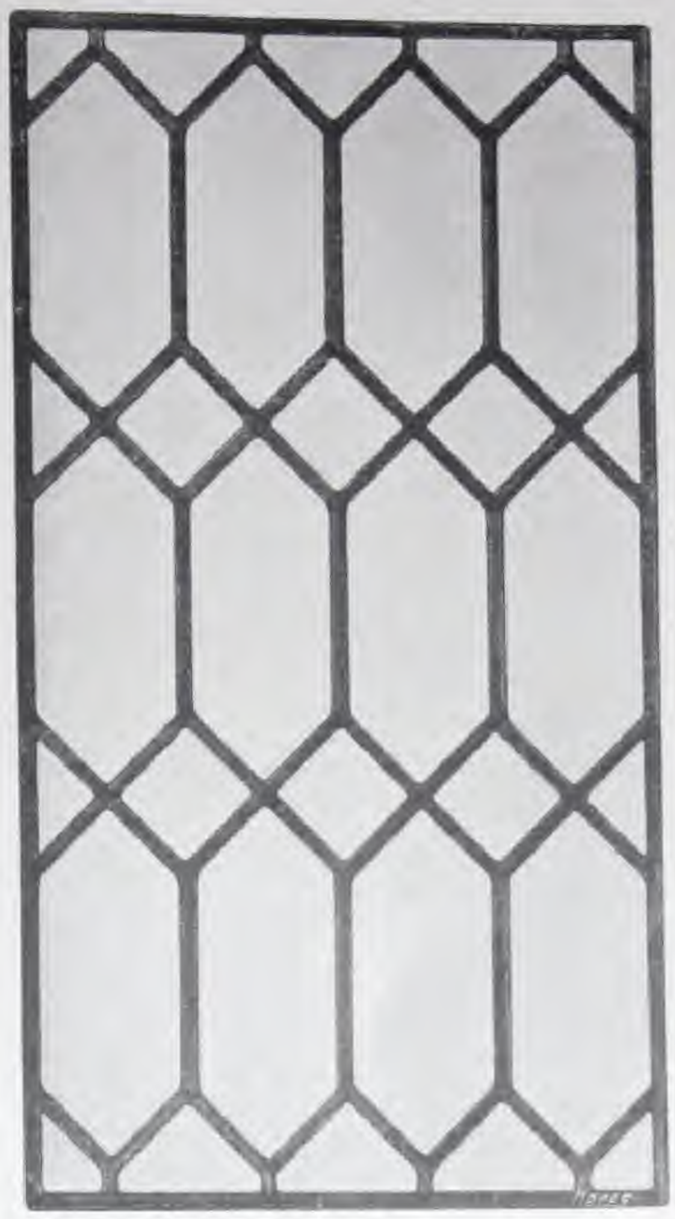
No. 7. 1/6 per sq. ft.



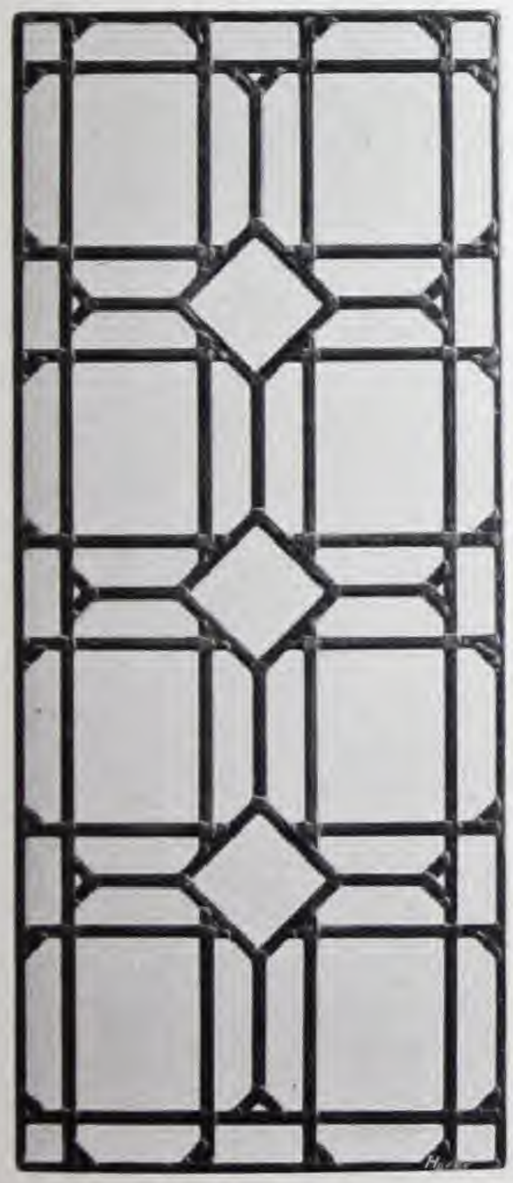
No. 8. 2/- per sq. ft.



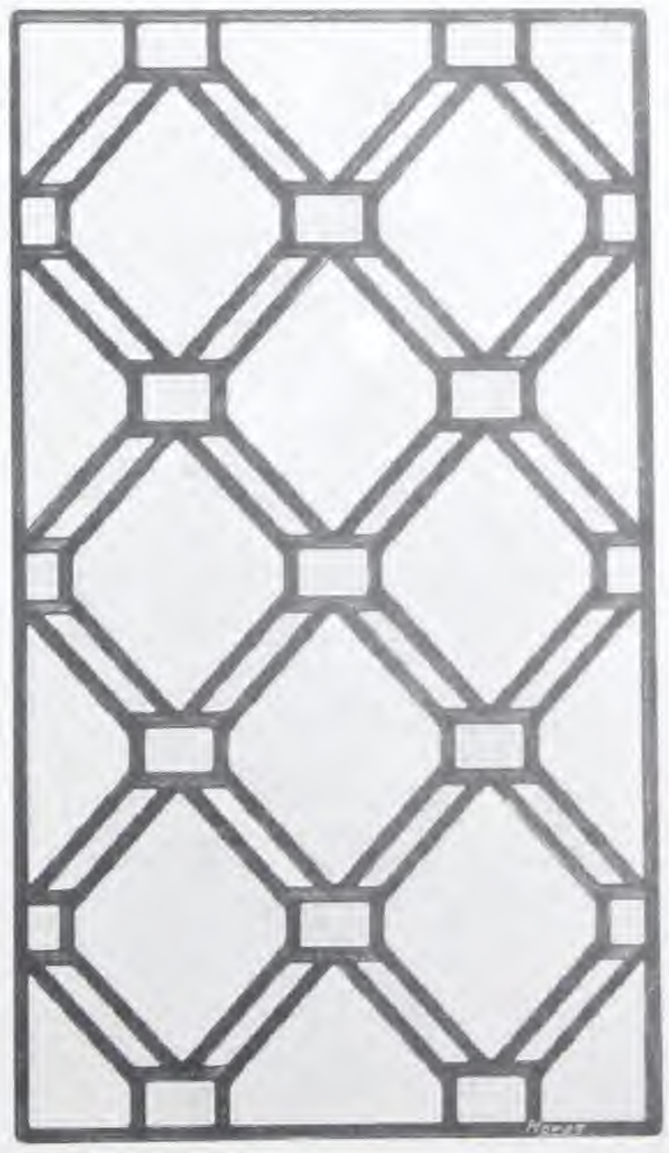
No. 9. 2/6 per sq. ft.



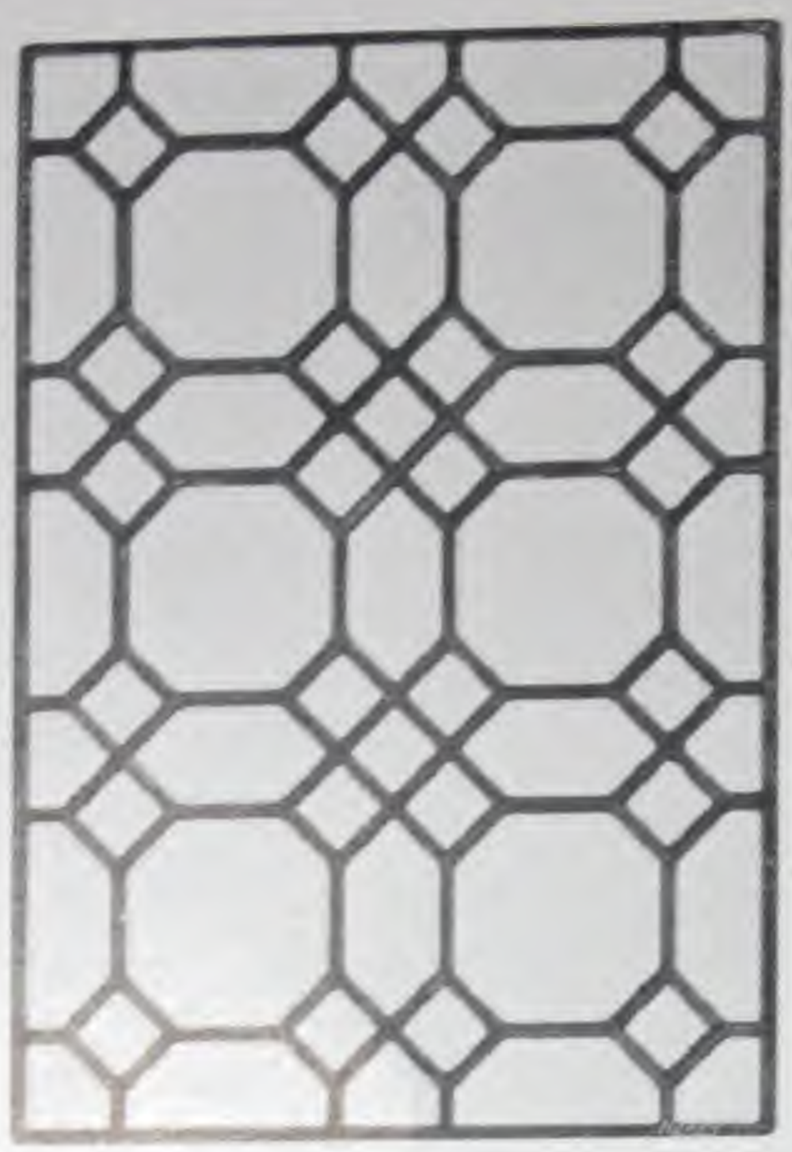
No. 10. 2/- per sq. ft.



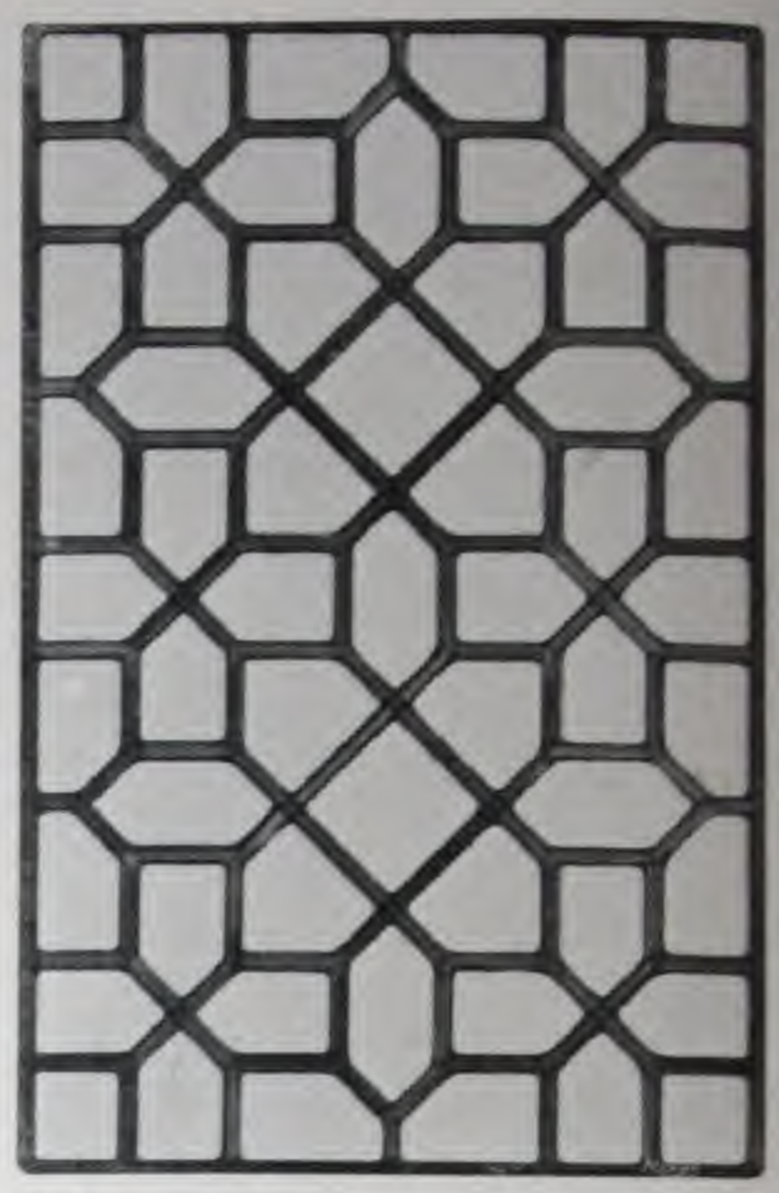
No. 11. 3/6 per sq. ft.



No. 12. 3/6 per sq. ft.



No. 13. 3/6 per sq. ft.



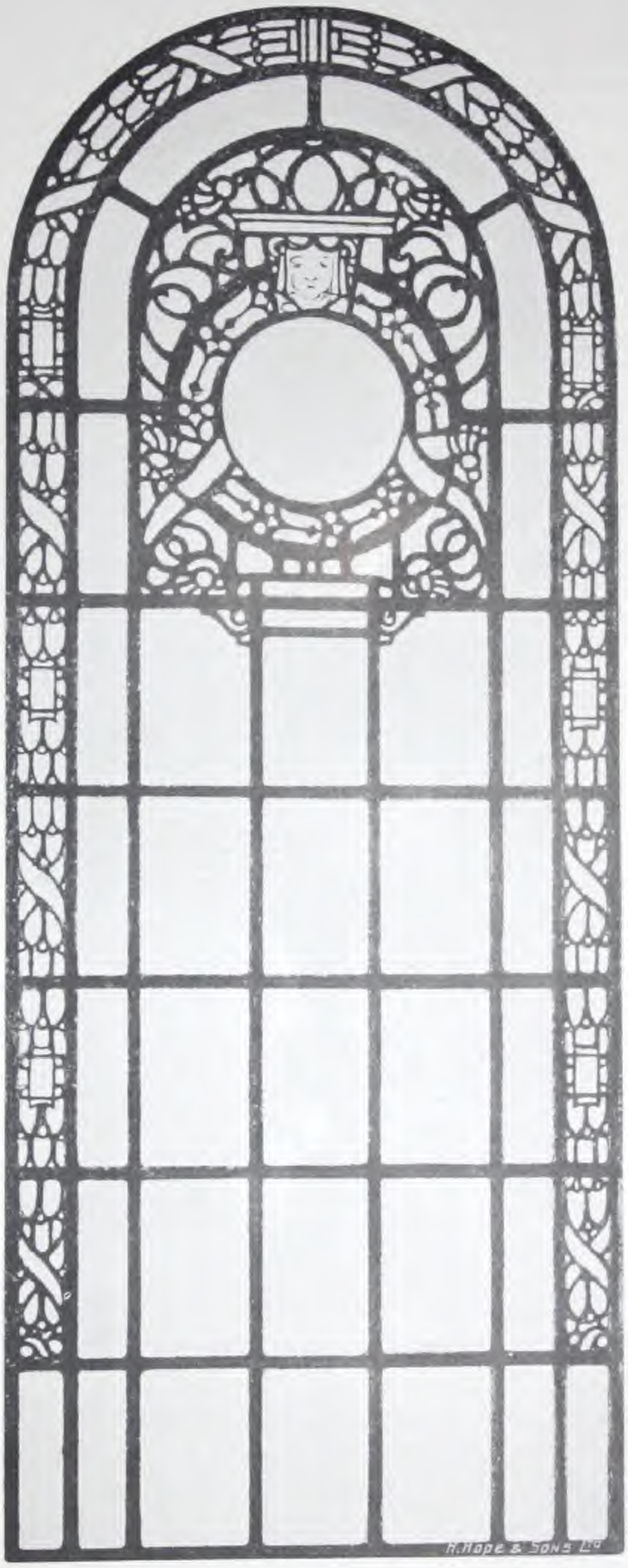
No. 14. 4/- per sq. ft.

No. 15. 4/- per sq. ft.

No. 16. 4/6 per sq. ft.

No. 17.

No. 18.



No. 19.

No. 20.

No. 21.

No. 22.

No. 23.

NOTE.—Designs for Stained Glass Windows and every description of Church work will be forwarded on application.

HOPE'S *Opening Gear*

LOWER MOOR BATHS, OLDHAM — J. Lindsay Grant, Architect

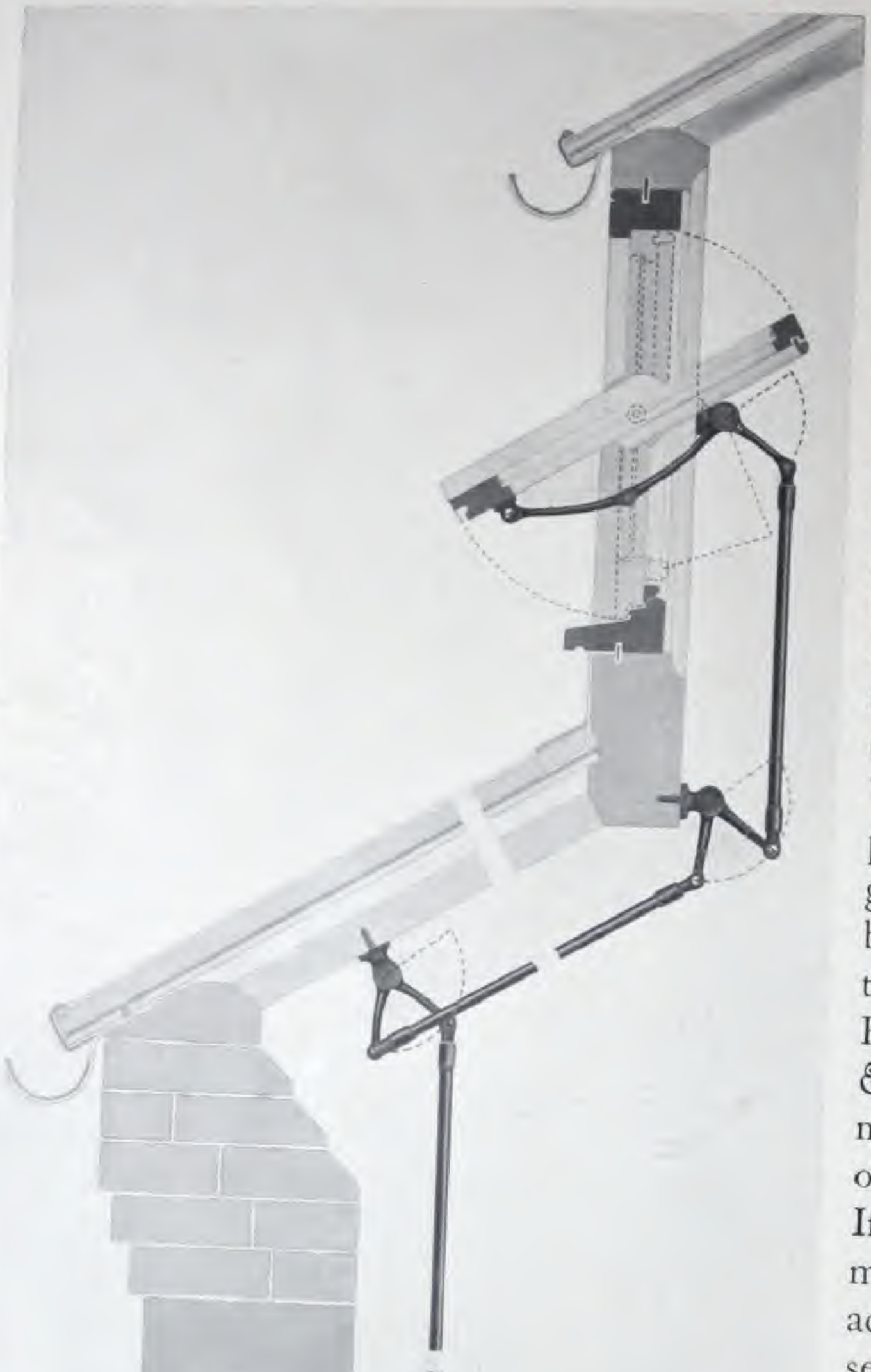
This photograph shews the application of Hope's gear to the lantern light of a swimming bath. The gear on each side is operated by a single screw regulator (A) *fixed on the end wall.*

The following pages, 92 to 97, are devoted to various types of opening gear, any of which can be applied when desired to the metal casements and windows in this catalogue instead of the standard fittings specified.

The illustrations and prices are for gearing prepared for fixing to *wooden* windows or fanlights, and the standard patterns are all kept in stock.

Special quotations and detail drawings will be sent upon application for any form of gearing for Baths, Laundries, Factories, Schools, etc., etc.

HOPE'S *Top Light Gear*



Sectional drawing shewing Hope's Gear to operate swinging lights in a lantern roof.

This type of gear is designed to operate long ranges of lights in the lanterns of *Winter Gardens, Conservatories, Power Stations, Swimming Baths, etc.* (see page 85).

It is not possible to make a comprehensive price list of gear of this description, as the conditions vary so greatly for different buildings, but we shall be pleased to give full detail drawings and estimates upon receipt of enquiry.

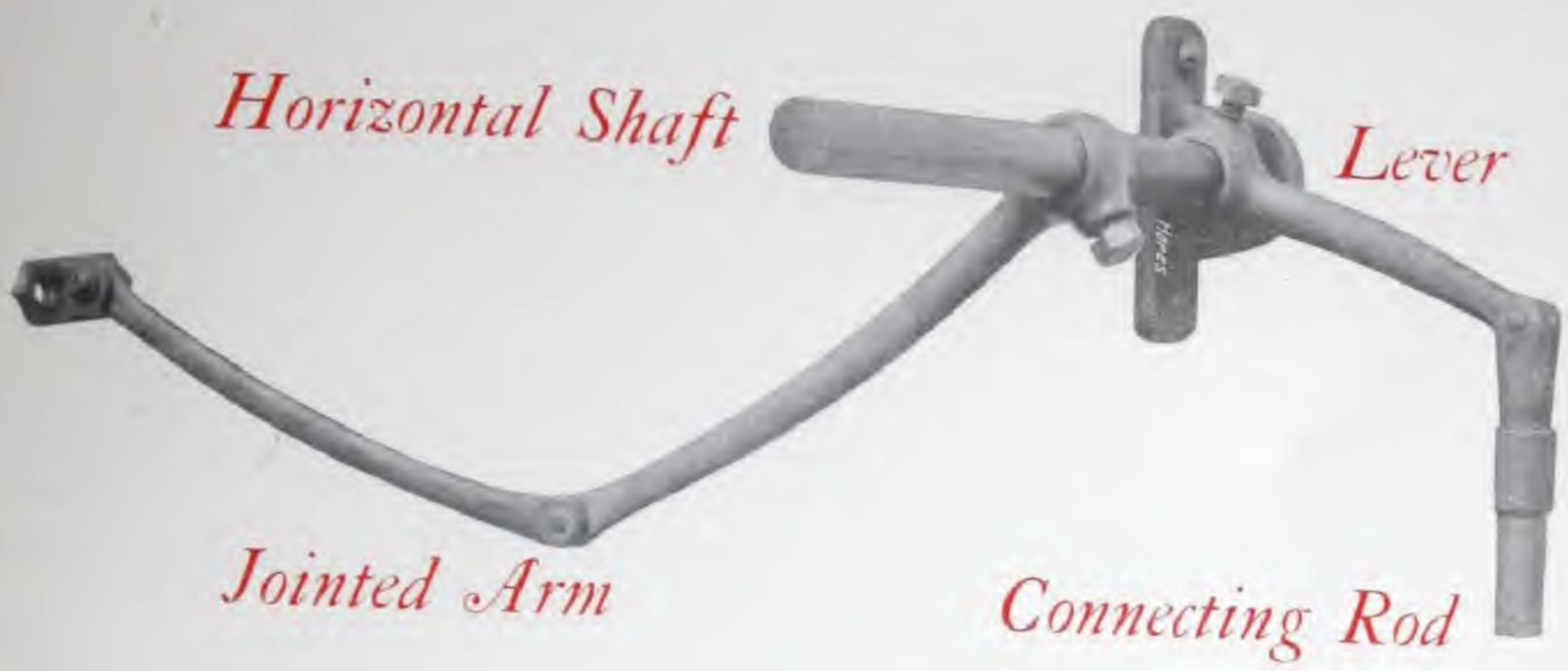
We have a wide range of patterns and can supply gear in painted iron for such buildings as those mentioned above, or in polished Bronze for *Banks, Offices & Public Buildings* where neatness and fine finish are of importance.

If desired, we will send a member of our staff to advise architects upon the selection of suitable gear, or to take particulars for quotations.

Hope's silent Bronze Screw Box or Regulator (see pages 94 & 95)

HOPE'S *Top Light Gear*

Details of Fittings used on pages 91 & 92



Connecting Rod

Bell Crank Lever

Screw Bracket
made in various sizes and shapes to suit all positions.

HOPE'S *Link Gear*

This gear is specially suitable for *single* fanlights or fanlights in pairs not exceeding 2 feet square. The attachment being to the side of the light, this pattern should not be used for large or heavy fanlights. It can be adapted (as shewn in the illustration) for fanlights hung at bottom, at top or to swing. The screws have lathe cut square threads and the regulators have machine cut wheels which engage accurately and are silent in action.

PRICES

	Steel Rods and Arms and Bronze Screw Regulators	All Bronze
To open 1 light : : : :	18/- each	27/- each
To open 2 lights : : : :	21/- each	32/- each

Prices are for rods up to 5 feet long, and for any of the three forms shewn above.

N.B.—When ordering state length of rod required and send details of woodwork.

HOPE'S *Shaft & Lever Gear*

PRICES

With iron shafts, arms etc., and bronze regulators and guides.

To open

1 light	20/-	each
2 ,,	26/-	,,
3 ,,	32/-	,,
4 ,,	38/-	,,

PRICES

All bronze

To open

1 light	45/-	each
2 ,,	55/-	,,
3 ,,	65/-	,,
4 ,,	75/-	,,

Hope's shaft and lever gear is suitable for opening lights of any size and can be adapted for opening very long ranges. The screws have square lathe cut threads and the regulators have machine cut wheels properly in mesh, making them perfect and silent in action.

The photograph shews our lightest pattern, which is neat and attractive in appearance and suitable for the upper lights in mullioned windows.

Heavier types are made for lantern lights, etc., and drawings and special quotations will always be supplied upon application. A competent representative will also attend when necessary to take particulars and advise upon the gear required.

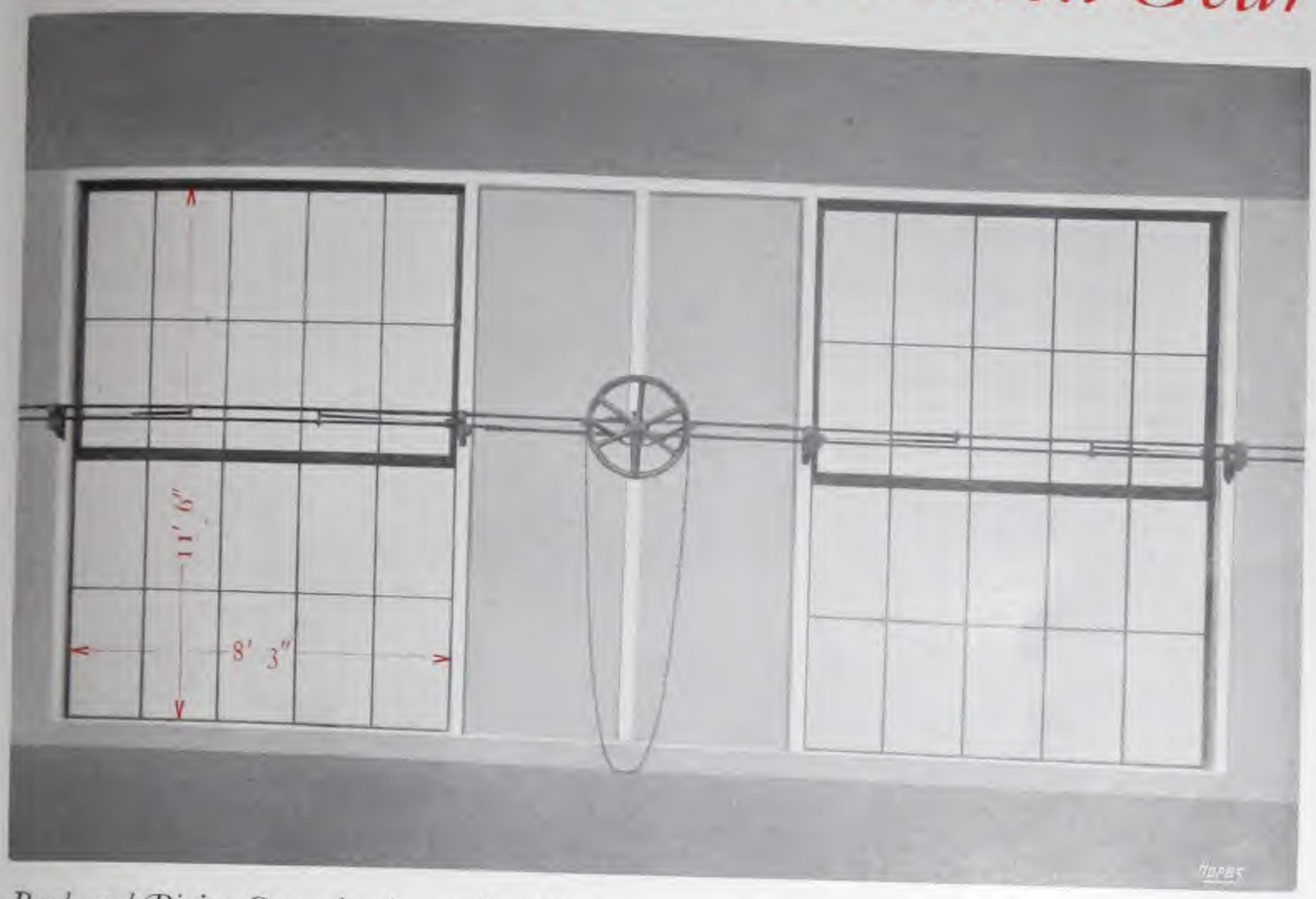
Prices are for vertical rods up to 5 feet long and for gear of suitable strength for fanlights not exceeding 2ft. 6in. square.

N.B.—Elevation of windows to scale & full size details should accompany an order.

HOPE'S *Special Chain Gear*

Illustration of 'Hope's Chain Gear opening a series of Sash Ventilators.

HOPE'S *Rack & Pinion Gear*



Rack and Pinion Gear shewing sashes closed.
This photograph and the one on page 96 illustrate a portion of a large order for windows and gear supplied to the new Perez workshops for the Central Argentine Railway Company. Each window is 11 ft. 6 in. high by 8 ft. 3 in. wide, and each set of gear operates five windows on a length of 110 ft.

THIS type of Gear has been designed to operate ranges of Sashes of greater length than 50 feet. It is more costly than our Rotating Shaft Gear illustrated on pages 92 and 93, but we strongly recommend it as the best possible mechanism for the operation of long ranges of sashes in machine shops, foundries, car sheds, power stations, etc.

Ranges of over 100 feet may be operated by the chain wheel control placed at one end, or greater lengths up to 200 feet when the power is placed in the centre of the run as shewn in the illustrations, and the whole range can be operated by one man.

We shall be pleased to give drawings and estimates upon receipt of enquiry and will send one of our staff to take particulars when desired to do so.

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Some Special Features of HOPE'S STEEL SASHES

Hope's Steel Sashes are made entirely by high grade machinery, and are superior to any other type of sash for Factory and Warehouse buildings. They have the following special features :—

Light. They ensure a maximum amount of light.

Strength. They are so strong as to be practically INDESTRUCTIBLE.

Fire Resistance. They are a necessity for fire-proof buildings, being made entirely of sections of solid rolled steel.

Standard Types. We particularly invite attention to the three Types upon which our $1\frac{3}{8}$ inch *standard* sashes are based (see pages 100 to 107). The variety of sizes of pane for each of these three types, together with our system of combining units for large windows, afford the widest scope for combinations of day-lighting and ventilation for a modern factory, with the immense advantage over special sizes of reduced cost and more rapid delivery.

Special Sizes. We continue to manufacture sashes of any size and shape to suit customers' special requirements, and will supply designs and estimates upon receipt of enquiry.

Heavy Sections. See our 2″ sections, pages 110 and 111, for sashes of specially large size.

┘ and ┴ Sections. We have a large variety of these, and illustrate a good example on pages 112 and 113.

Rapid Delivery. We have an unrivalled plant for rapid production, and we are always in a position to execute orders of any magnitude without delay.

NOTE.—In comparing prices, we respectfully call attention to our Specification of Manufacture, page 115. We are always glad to furnish sample windows in support of our statements as to the quality of our work.

HOPE'S *Steel Sashes*

STANDARD TYPES *for* 1 5/8 In. *Section*

Explanation

Type · 3 ·

The standard sizes of our 1⅝" steel sashes are made in three Types:

Type 3, three panes wide;
Type 4, four panes wide;
Type 5, five panes wide.

} see diagrams

Each Type is manufactured for stock sizes of glass:

10", 11", 12", 13" and 14" wide.
16", 17", 18", 19" and 20" high.

The widths and heights of sashes of each type for each size of glass are given in the accompanying tables. A large window may be formed by joining any number of these units together, and for this purpose the left hand side of each sash is ribbed, as shown at I-J on pages 102 and 103, and screwed to the adjoining sash. This makes an exceptionally strong and weathertight joint, without the use of loose muntins.

Sashes may be made to glaze inside or outside; but it is generally recommended that they should be glazed outside.

There is no advantage in glazing inside, except where ventilators or casements are made to open outwards, when it is possible to make these stronger and more economically if the sashes glaze on the inside (see pages 106 and 107).

TABLE OF WIDTHS

Glass	10"	11"	12"	13"	14"
Sashes	2'-7¾"	2'-10¾"	3'-1¾"	3'-4¾"	3'-7¾"

Three Vents which may be used in any position in "Type 3" Sashes.

For table of heights for Type 3 see general table on page 101.

For details of our various forms of Ventilators see pages 103, 104, 105 & 106.
For details of Fire Escape Casements see page 107.

HOPE'S *Steel Sashes*

STANDARD TYPES *for* 1 5/8 In. *Section*

Type · 4 ·

TABLE OF WIDTHS

Glass / *Sashes*	10"	11"	12"	13"	14"
	3'-6"	3'-10"	4'-2"	4'-6"	4'-10"

Three Vents which may be used in any positions in "Type 4" Sashes.

Type · 5 ·

TABLE OF WIDTHS

Glass / *Sashes*	10"	11"	12"	13"	14"
	4'-4 3/8"	4'-9 3/8"	5'-2 3/8"	5'-7 3/8"	6'-0 3/8"

Four Vents which may be used in any positions in "Type 5" Sashes.

TABLE OF HEIGHTS FOR TYPES 3, 4 & 5.

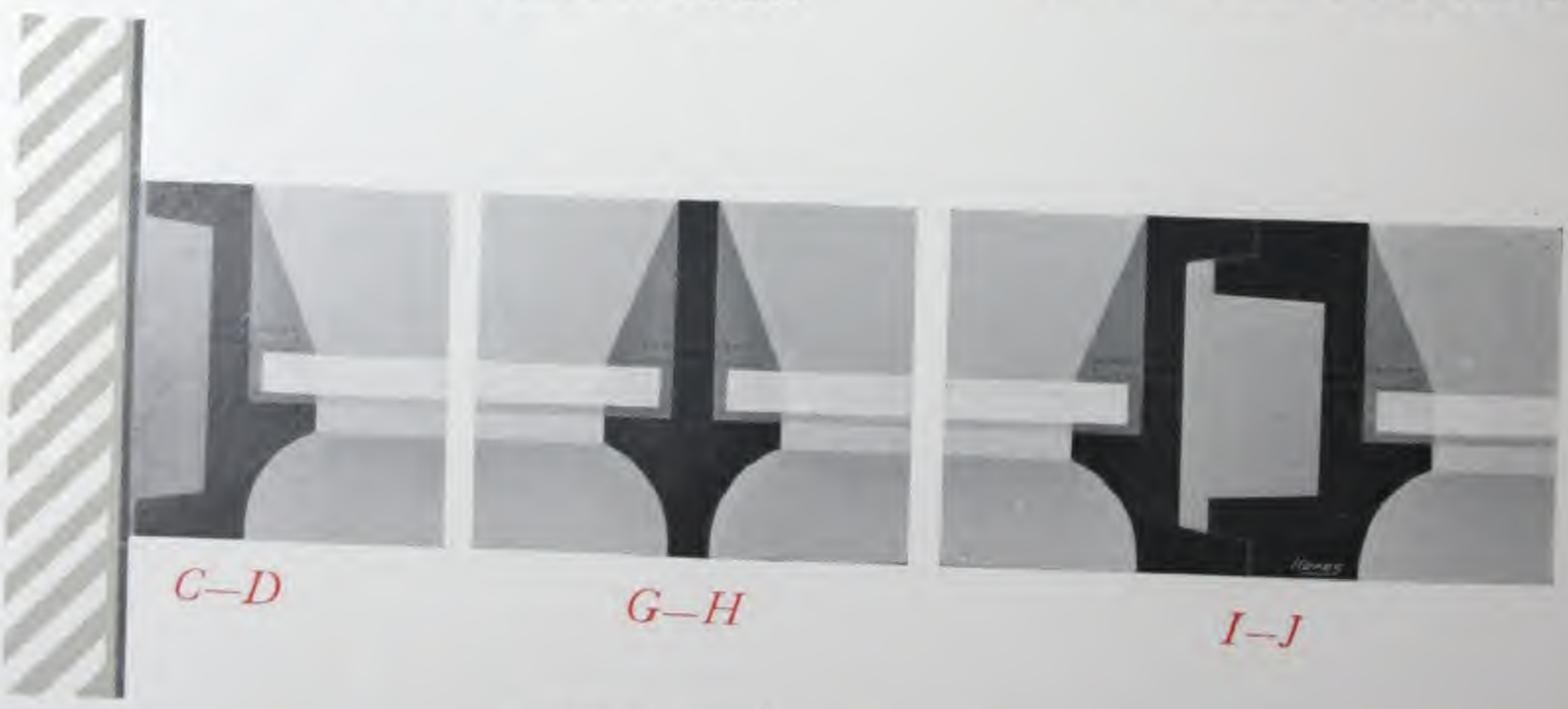
Over all heights of sashes — *Panes high*	*Top line gives heights of glass* 16"	17"	18"	19"	20"
2	2'-9 3/8"	2'-11 3/8"	3'-1 3/8"	3'-3 3/8"	3'-5 3/8"
3	4'-1 3/4"	4'-4 3/4"	4'-7 3/4"	4'-10 3/4"	5'-1 3/4"
4	5'-6"	5'-10"	6'-2"	6'-6"	6'-10"
5	6'-10 3/8"	7'-3 3/8"	7'-8 3/8"	8'-1 3/8"	8'-6 3/8"
6	8'-2 3/4"	8'-8 3/4"	9'-2 5/8"	9'-8 5/8"	10'-2 5/8"
7	9'-7"	10'-2"	10'-9"	11'-4"	11'-11"
8	10'-11 1/4"	11'-7 1/4"	12'-3 1/4"	12'-11 1/4"	13'-7 1/4"

For details of our various forms of Ventilators see pages 103, 104, 105 & 106.
For details of Fire Escape Casements see page 107.

HOPE'S $1\frac{5}{8}$ In. SECTION
Steel Sashes

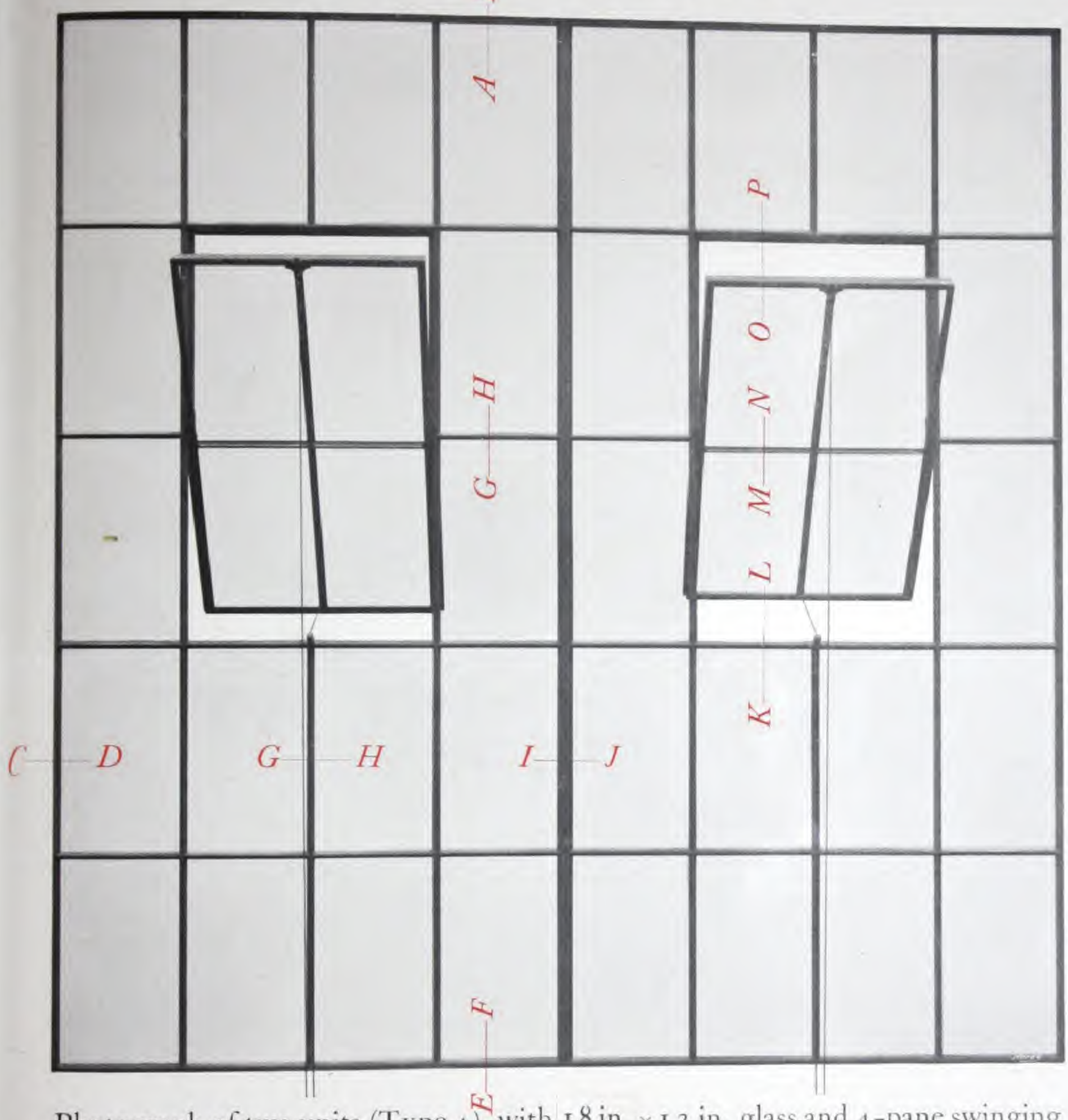
HALF FULL SIZE SECTION
through SWINGING VENTILATOR

FULL SIZE SECTIONS



FULL SIZE SECTIONS

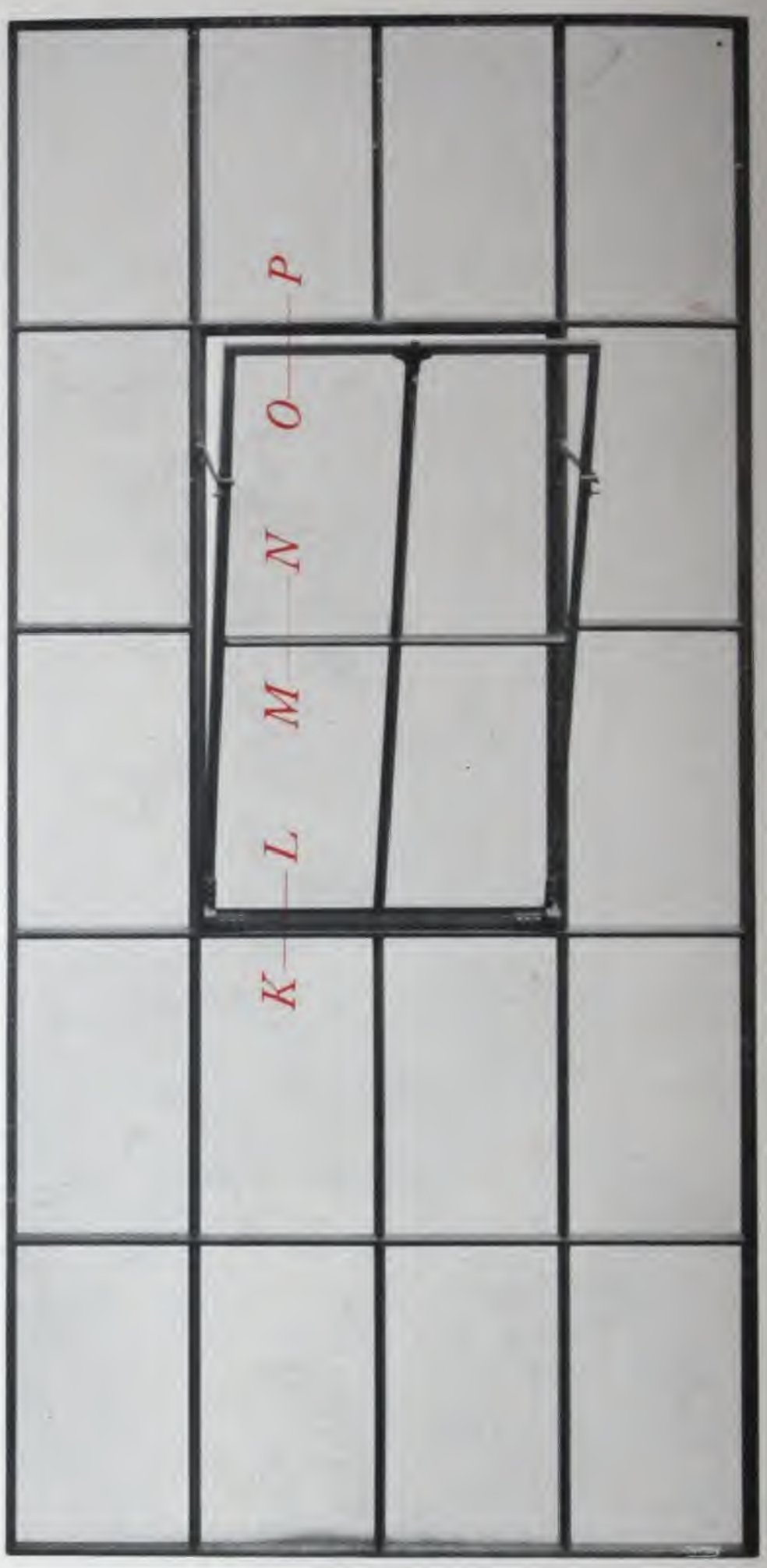
HOPE'S $1\frac{5}{8}$ In. SECTION
Steel Sashes



Photograph of two units (Type 4), with 18 in. × 12 in. glass and 4-pane swinging ventilators, joined at I—J with Hope's stanchion bar, which enables any number of units to be joined up without the use of loose muntins.

By reference to the table on page 101 it will be seen that the size of each of the above is 7 ft. $8\frac{3}{8}$ in. high × 4 ft. 2 in. wide, making a total width of 8 ft. 4 in.

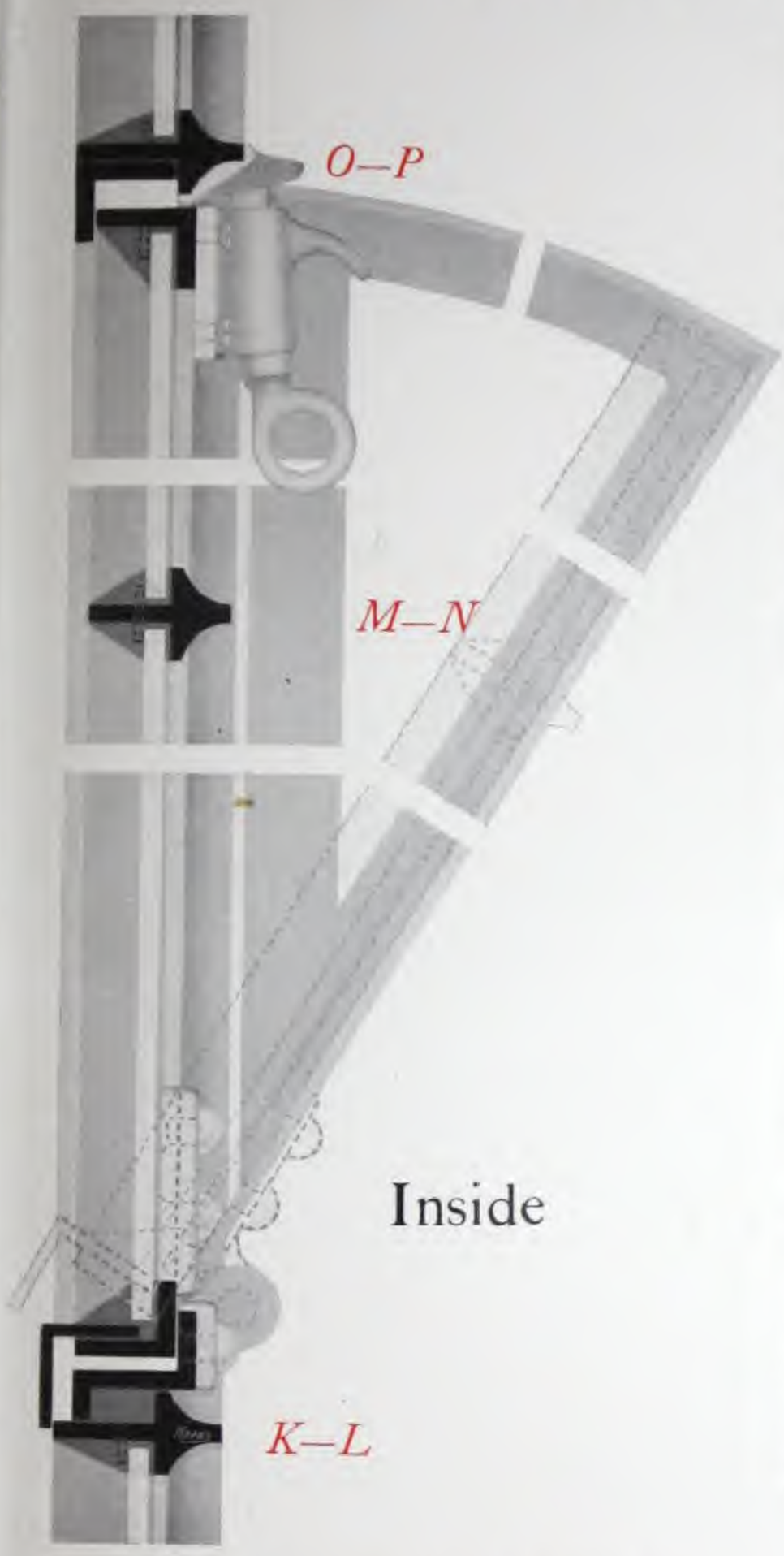
HOPE'S $1\frac{5}{8}$ In. SECTION
Steel Sashes

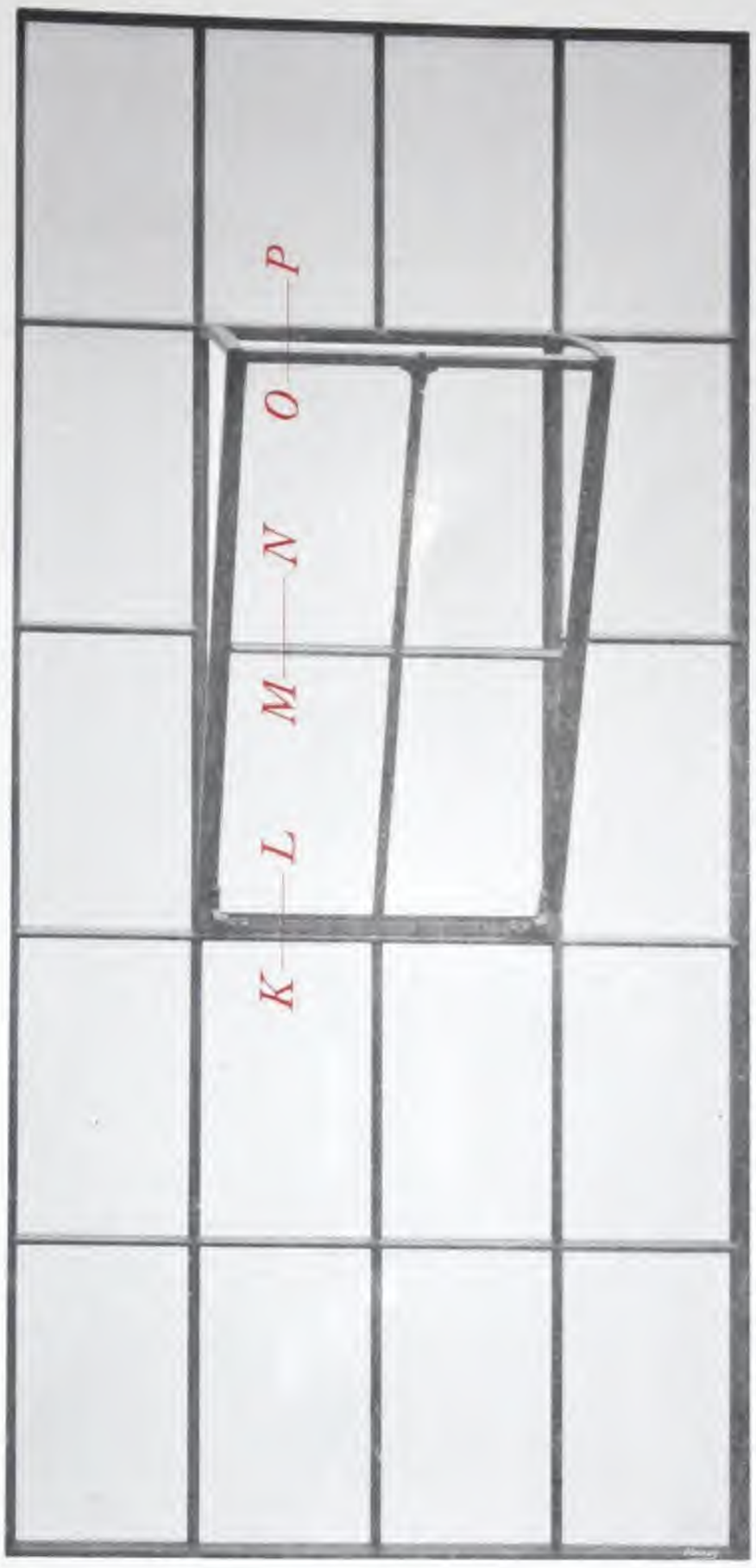


HALF FULL SIZE SECTION
through BOTTOM HUNG VENTILATOR

The above is a photograph of one unit (Type 4), with 18 in. × 12 in. glass and 4-pane ventilator hung at bottom, and fitted with Bronze Spring Catch and Iron Folding Side Arms.

HOPE'S $1\frac{5}{8}$ In. SECTION
Steel Sashes

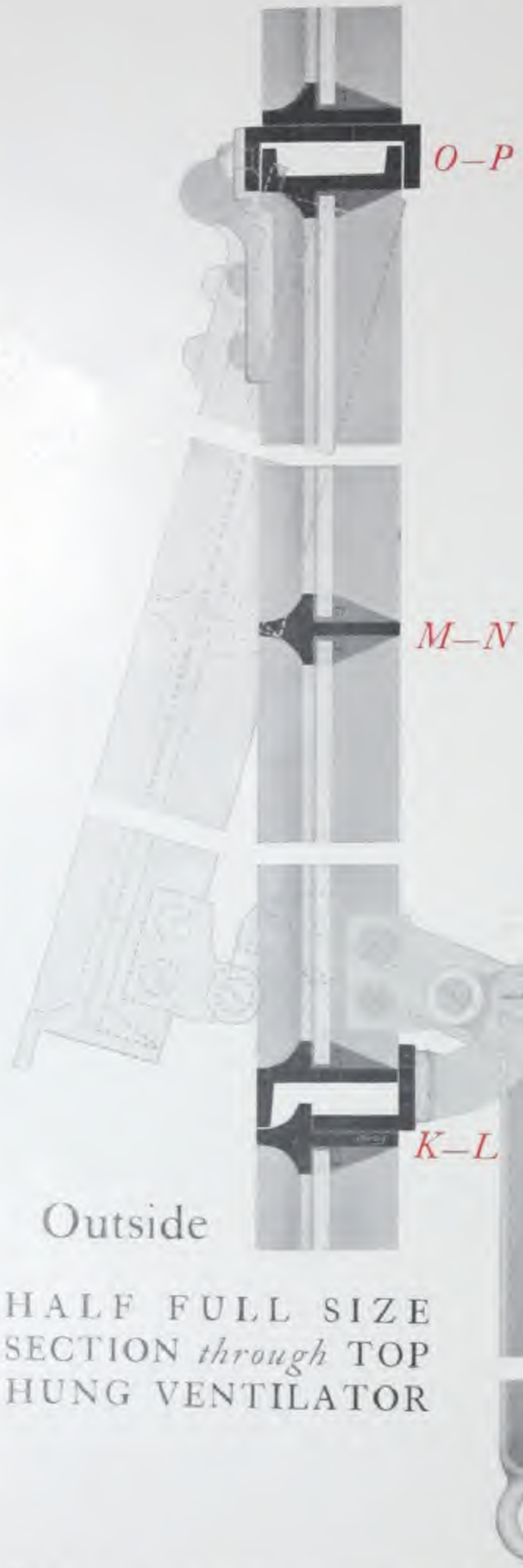




HALF FULL SIZE SECTION
through HOPPER VENTILATOR

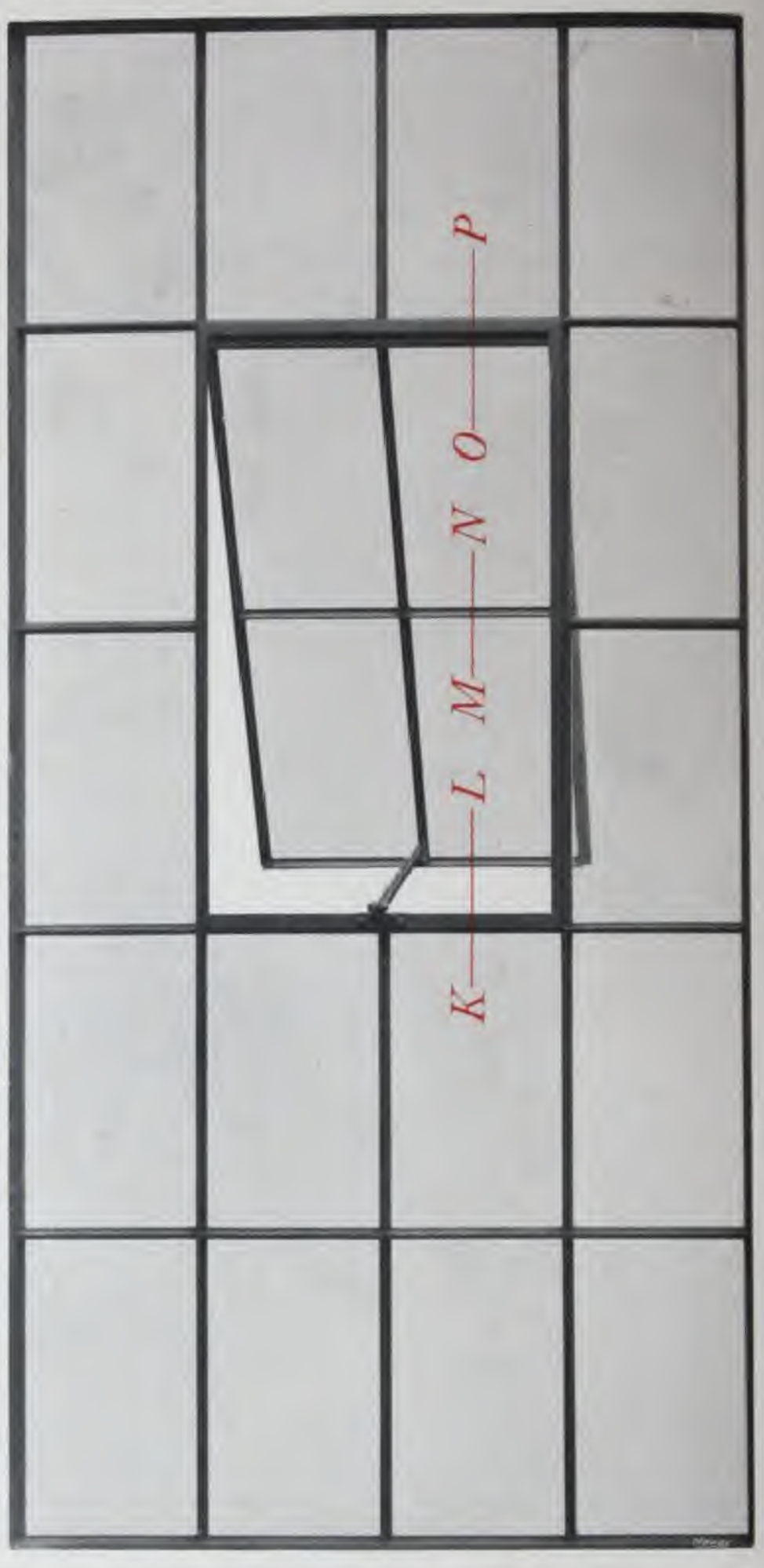
The above is a photograph of one unit (Type 4), with 18 in. × 12 in. glass and 4-pane ventilator hung at bottom, and fitted with Side Checks and Spring Catch.

HOPE'S $1\frac{5}{8}$ In. SECTION
Steel Sashes



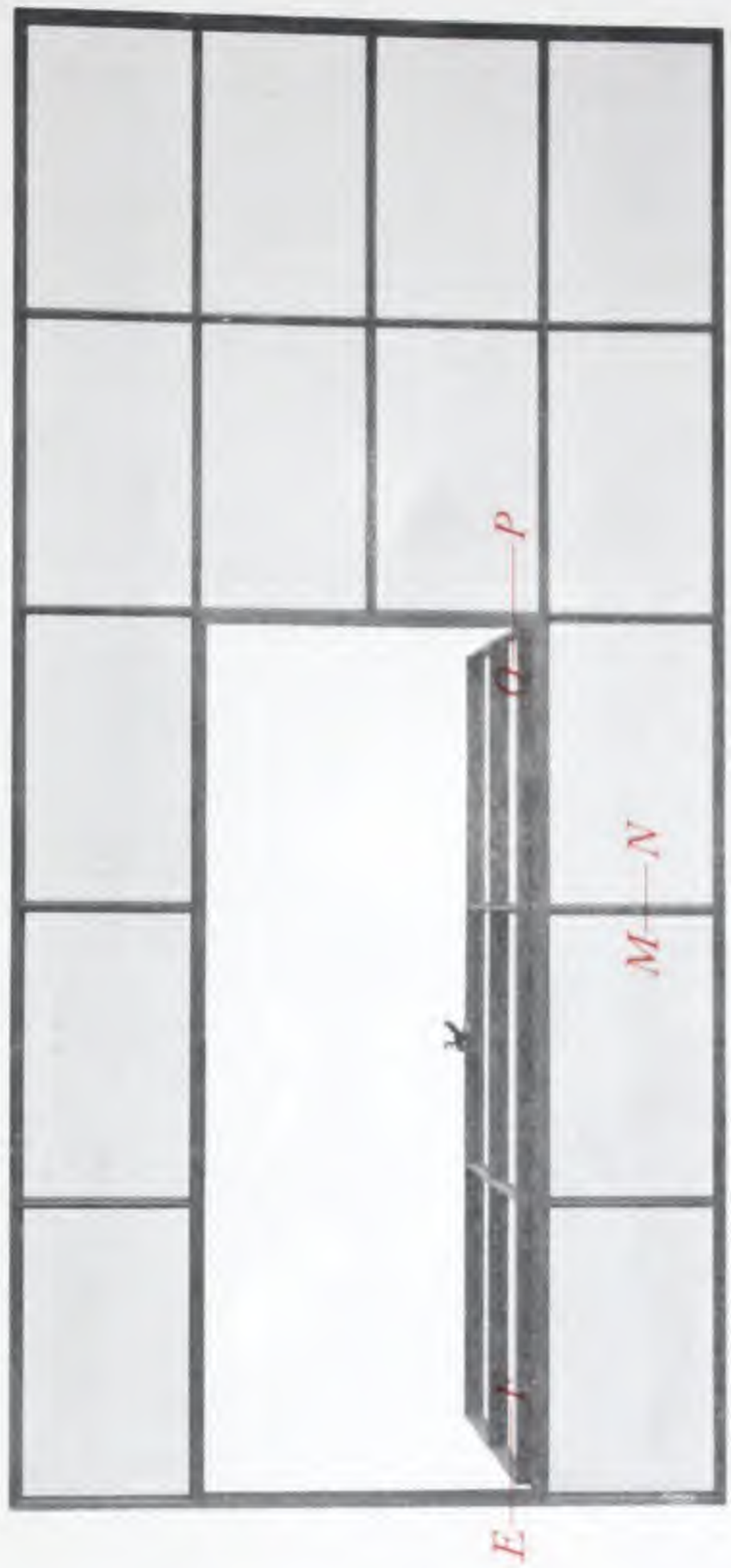
Outside

HALF FULL SIZE
SECTION *through* TOP
HUNG VENTILATOR



The above is a photograph of one unit (Type 4), with 18 in. × 12 in. glass and 4-pane ventilator hung at top and fitted with Hope's Patent Cam Opener.

HOPE'S $1\frac{5}{8}$ In. SECTION
Steel Sashes



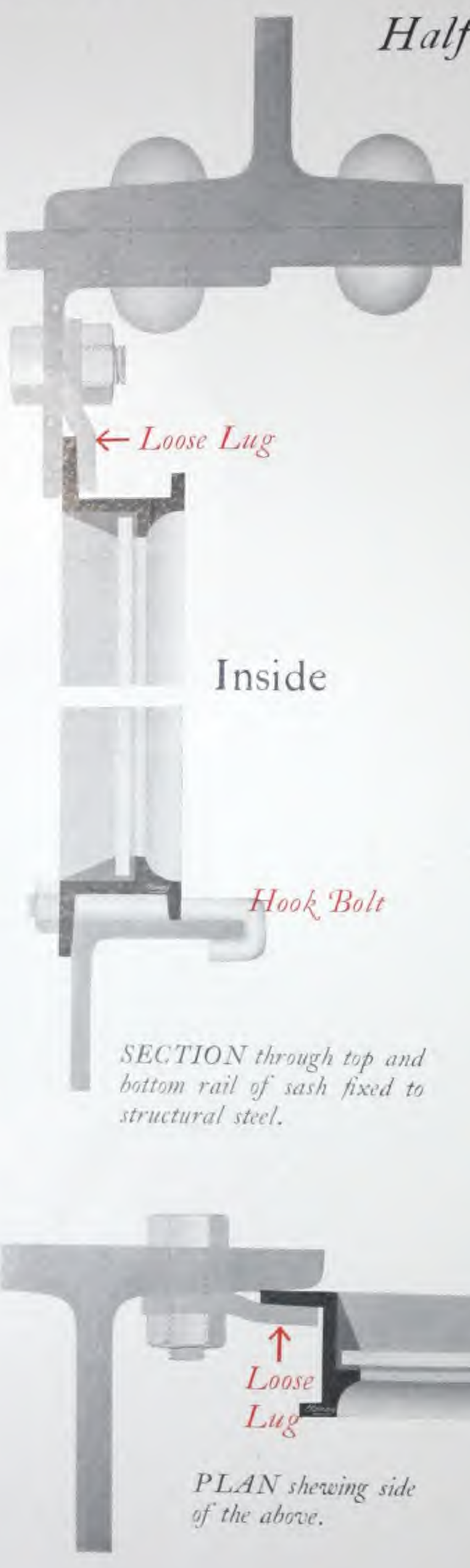
HALF FULL SIZE SECTION
through SIDE HUNG CASEMENT

The above is a photograph of one unit (Type 4), with 18 in. × 12 in. glass and 6-pane fire escape casement, as required by many building bye laws.

NOTE.—Sashes with outward opening casements are best glazed from INSIDE. They can, however, be constructed to glaze from outside at a slightly increased cost.

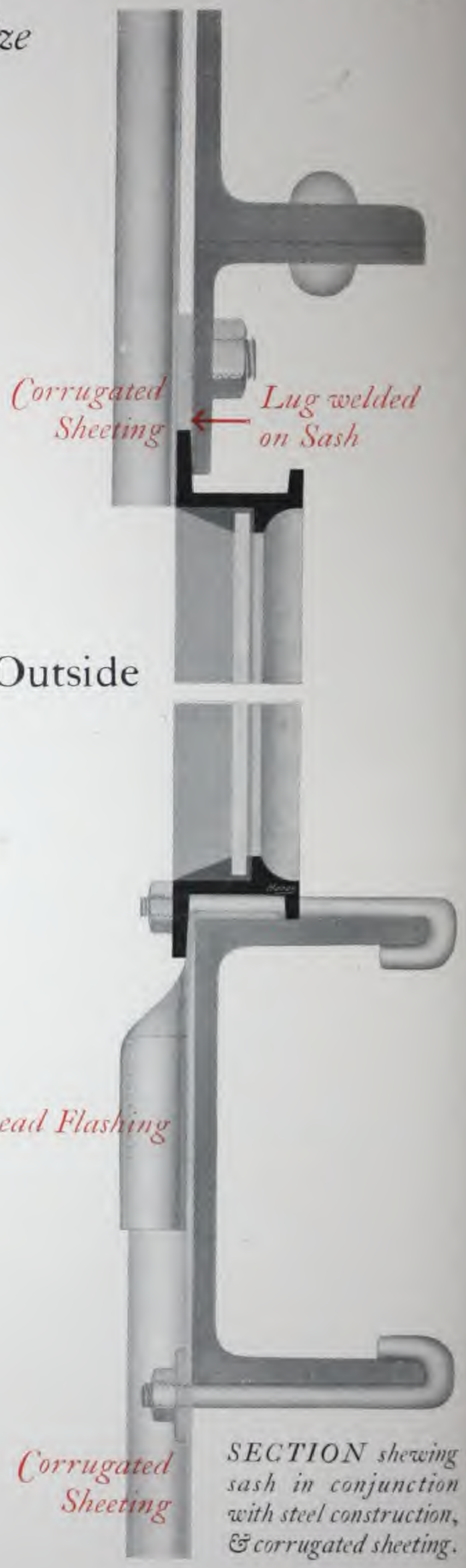
DETAILS *for* FIXING
Steel Sashes in Steel Frame Buildings

Half full size



Inside

SECTION through top and bottom rail of sash fixed to structural steel.



Outside

PLAN shewing side of the above.

SECTION shewing sash in conjunction with steel construction, & corrugated sheeting.

DETAILS *for* FIXING
Steel Sashes in Ferro-Concrete Buildings

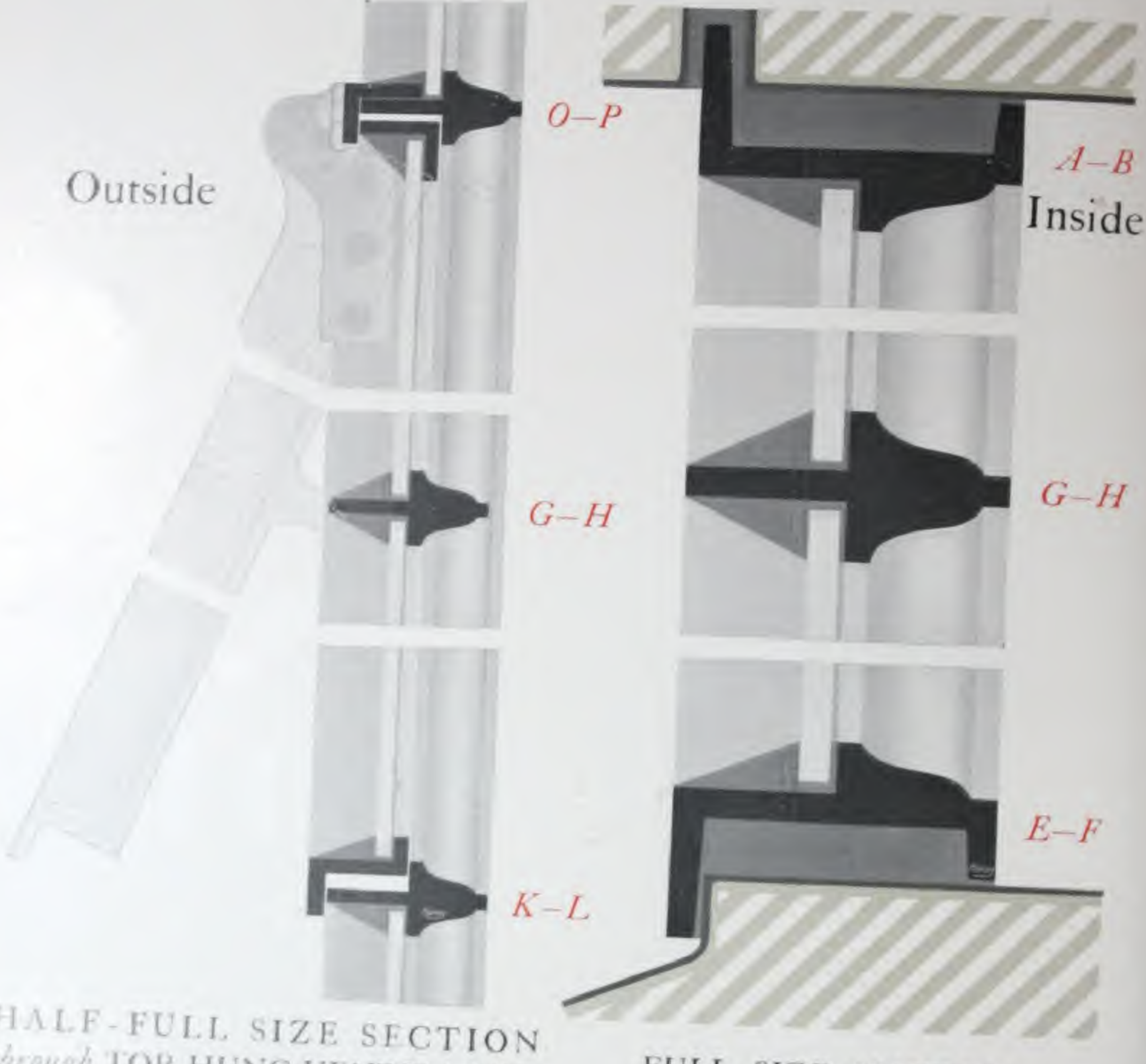
View of Hinged Lug.

The pockets * should be formed with wooden blocks, built in, and drawn after the concrete is set.
The sashes (with the hinged lugs closed) can then be placed in position, the lugs turned back, and grouted with cement.

Outside

HALF FULL SIZE SECTION *of* Head and Sill.

HOPE'S 2 In. SECTION
Steel Sashes

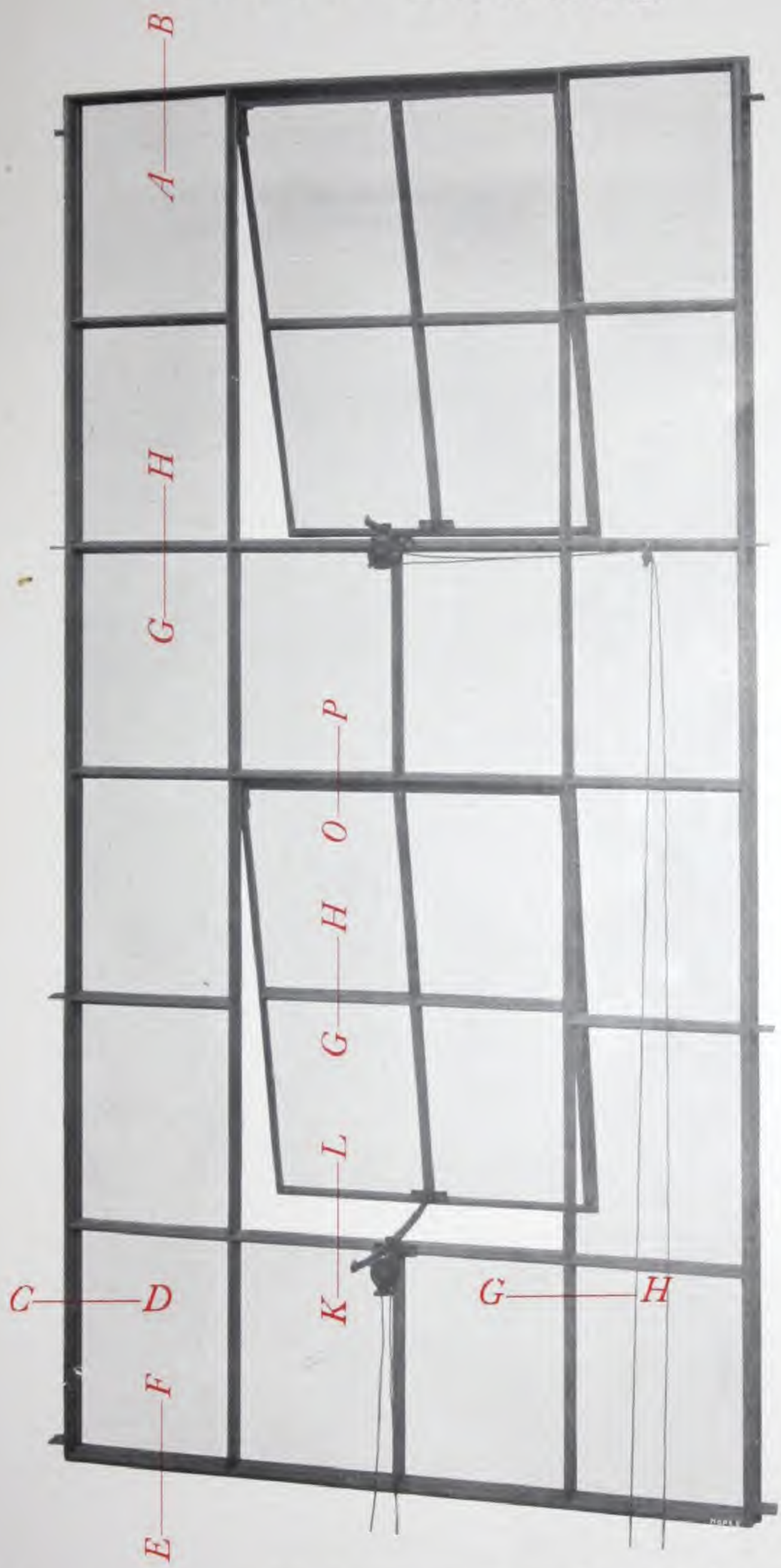


HALF-FULL SIZE SECTION
through TOP HUNG VENTILATOR

FULL SIZE SECTIONS

FULL SIZE SECTIONS

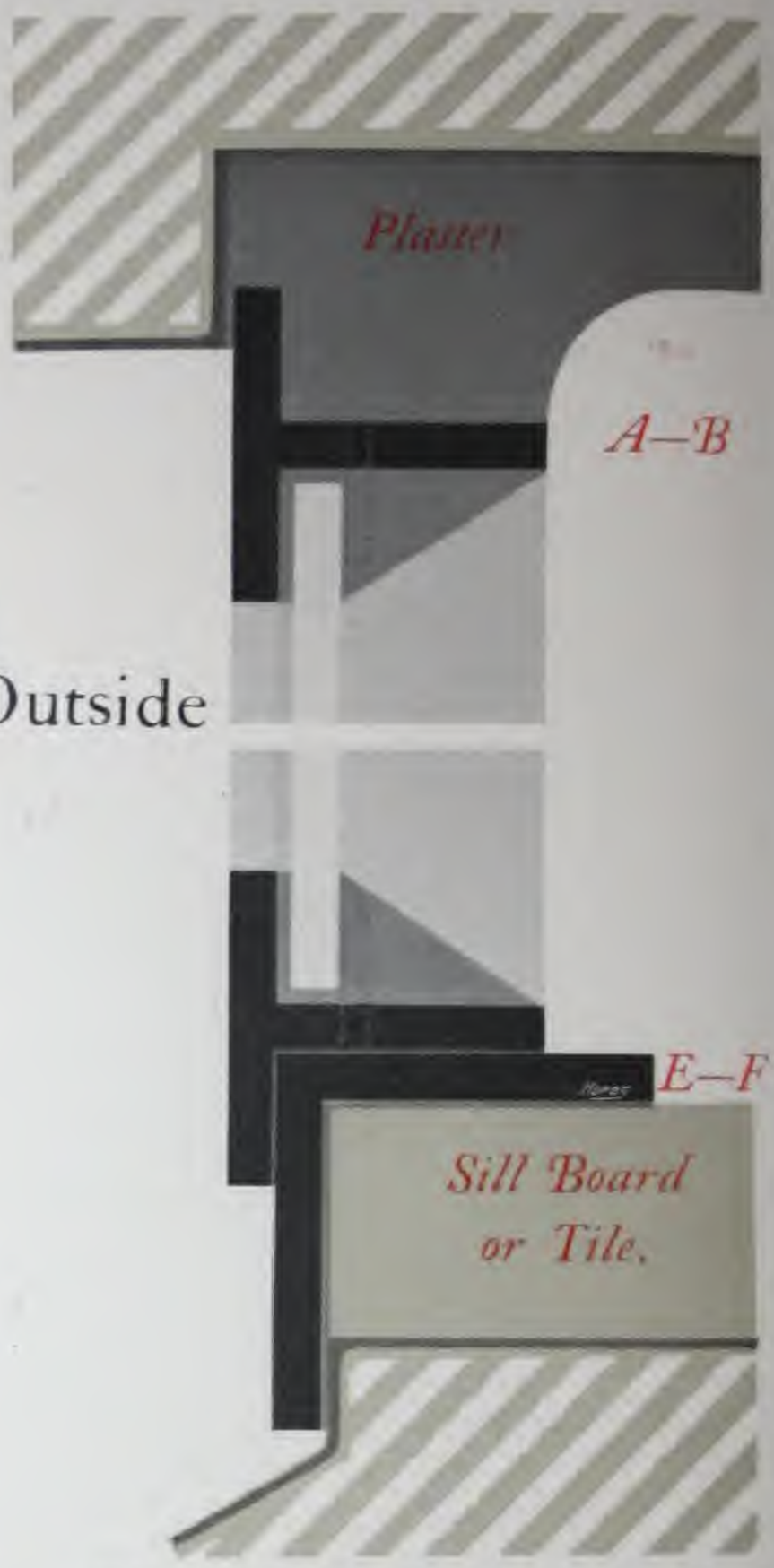
HOPE'S 2 In. SECTION
Steel Sashes



Our 2 inch Sections are suitable for large sashes of special design and may be fitted with any of the forms of ventilator on pages 103, 104, 105 & 106.
The above is a photograph of one of a large number supplied for the new General Post Office, London.

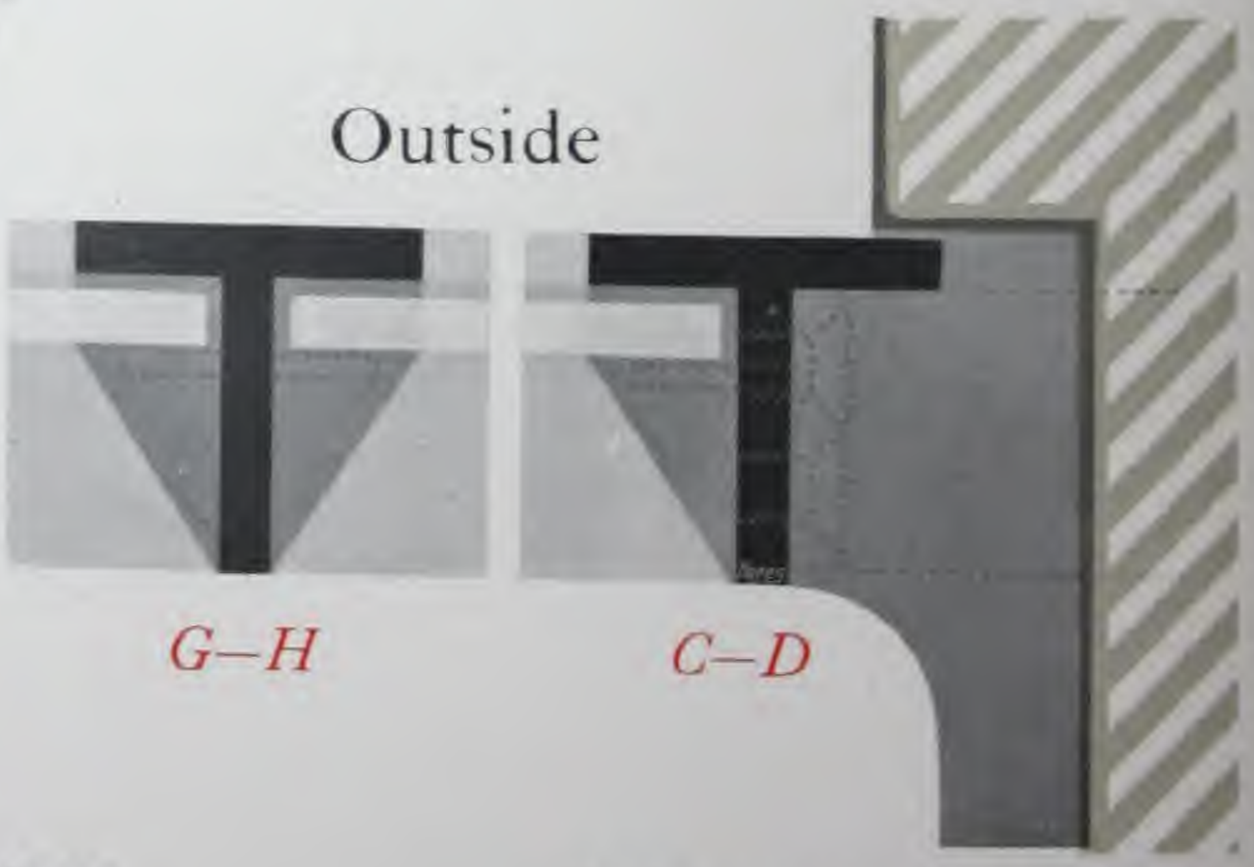
HOPE'S ⊥ SECTION

Steel Windows



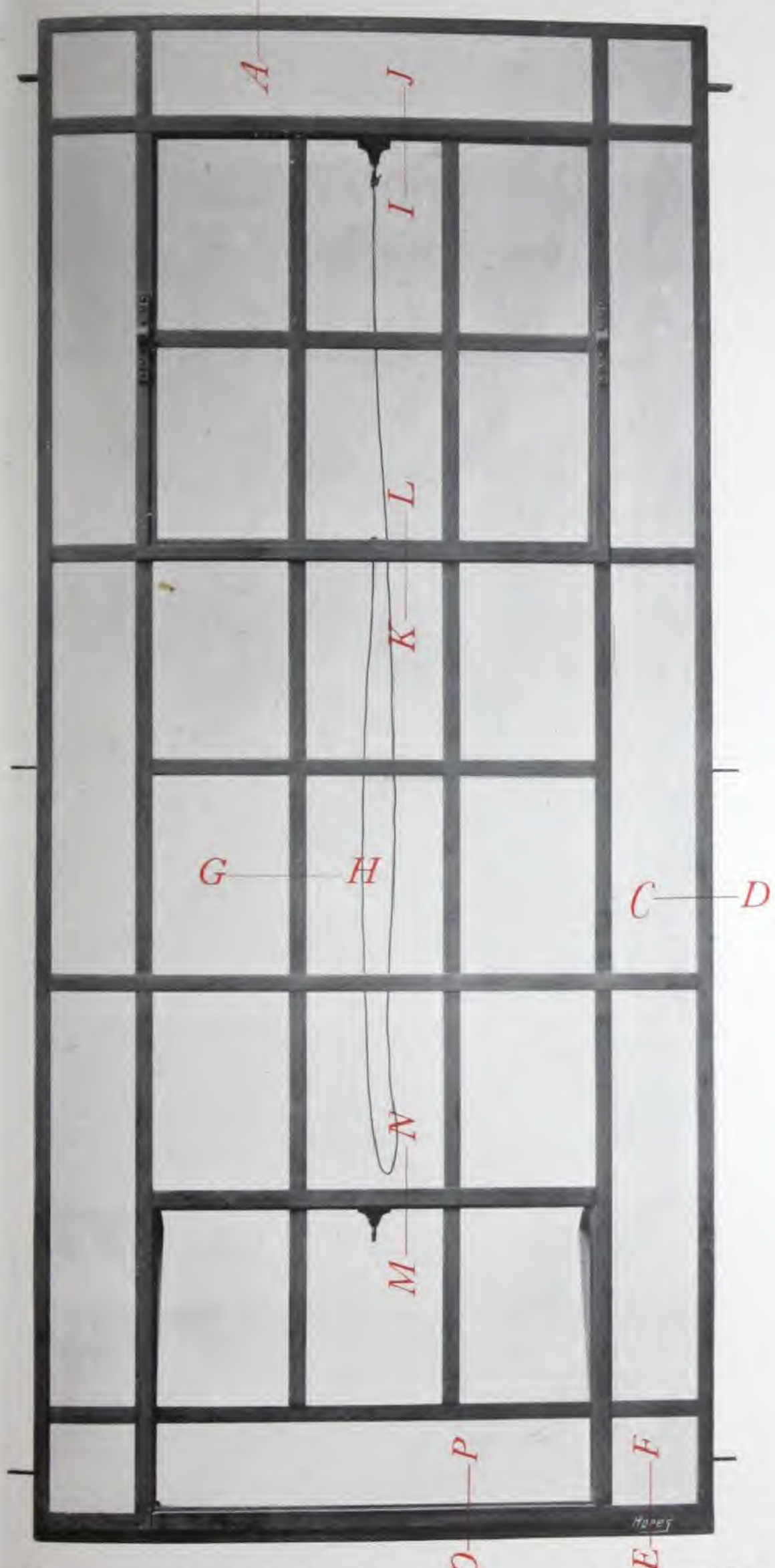
FULL SIZE SECTIONS.

HALF FULL SIZE SECTION.



FULL SIZE SECTIONS.

HOPE'S ⊥ SECTION
Steel Windows



Another view of the same window shewing ventilators open.

Photograph of ⊥ Section window as designed for schools, with hopper ventilator at sill level, and swinging ventilator in the top part. Windows of ⊥ construction are manufactured in a variety of designs to suit all classes of buildings.
Details and estimates on application.

POWER STATION
WINDOWS AND GEAR

GREENWICH GENERATING STATION, London County Council.

This window is 39ft. high by 48ft. wide, and each of the three bays is constructed of steel throughout.
The swinging casements are each 3ft. high by 6ft. wide and are operated in three sets (the centre being a set of twenty-four casements with a set of fourteen on each side) by Hope's screw opening gear.
Our services are always at the disposal of architects and engineers for detailed designs for this class of work.

Specification of Manufacture of HOPE'S STEEL SASHES

Bars. Each section is of solid rolled mild steel, hydraulically straightened, and free from hammer marks or distortions of any kind.

Joints. The ends of bars are scribed and tenoned on milling machines, with special cutters of correct contour for each section. The mitres are correctly cut so as to drive together tightly, and the tenons are rivetted over through tenon holes in the outer frames. This method ensures absolutely perfect joints, and leaves the frames at full strength.

Ventilators. The ventilators are formed, as shewn on the details, with L section linings, giving two points of contact to the outward opening parts. This method of constructing ventilators leaves the sash at its full strength, no part of the moulding being cut away.
All hinges are mild steel forgings, bushed with bronze, lathe turned and bored to a perfect fit. Spring catches are of bronze, of substantial pattern.

Painting. All sashes are painted two coats of genuine oil paint.

Fit and Finish. A superior finish is maintained throughout, both in the general appearance of the sashes and in the fit and finish of the ventilators.

Inspection. All sashes are subjected to a rigid inspection as to size, quality and finish before despatch.

Welding. The cross joints may be welded, at a small extra cost, either on one side or both, as shewn in the accompanying illustration. This method of welding the cross joints makes the strongest possible sash, and is particularly recommended where the panes are very large.

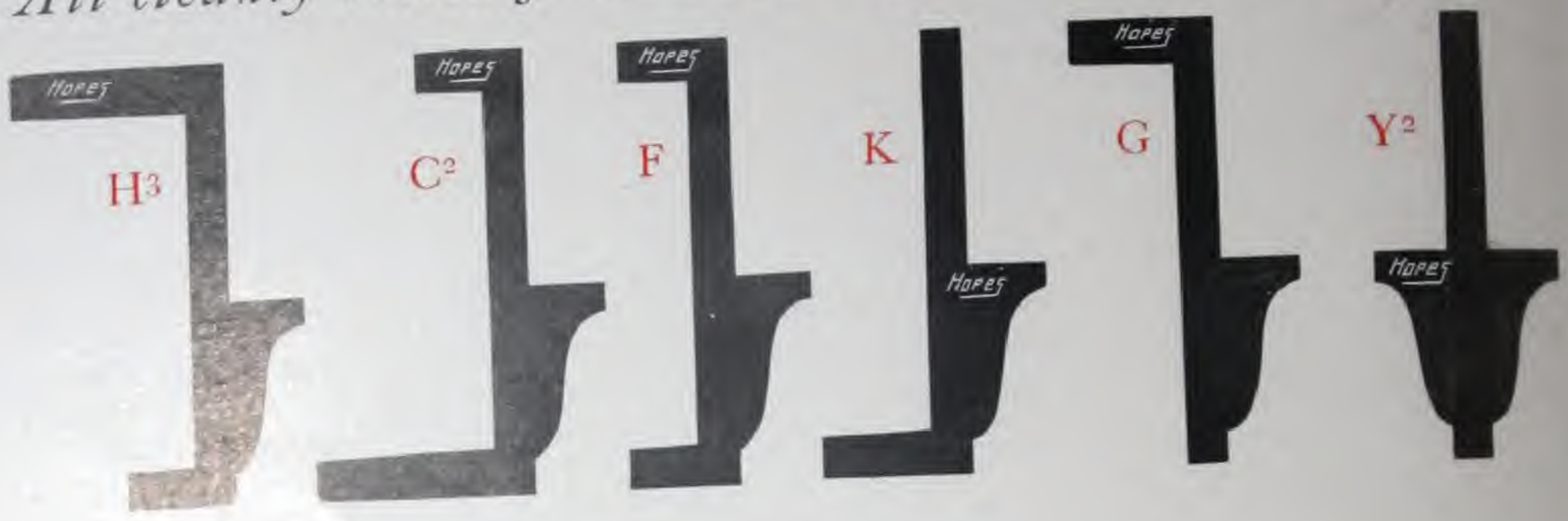
Building In. Unless otherwise ordered horns are provided on corners and lugs on sides for building into brickwork.

Ferro-Concrete. Where sashes are required for fixing in ferro-concrete we recommend our hinged lugs as shewn on pages 108 and 109.

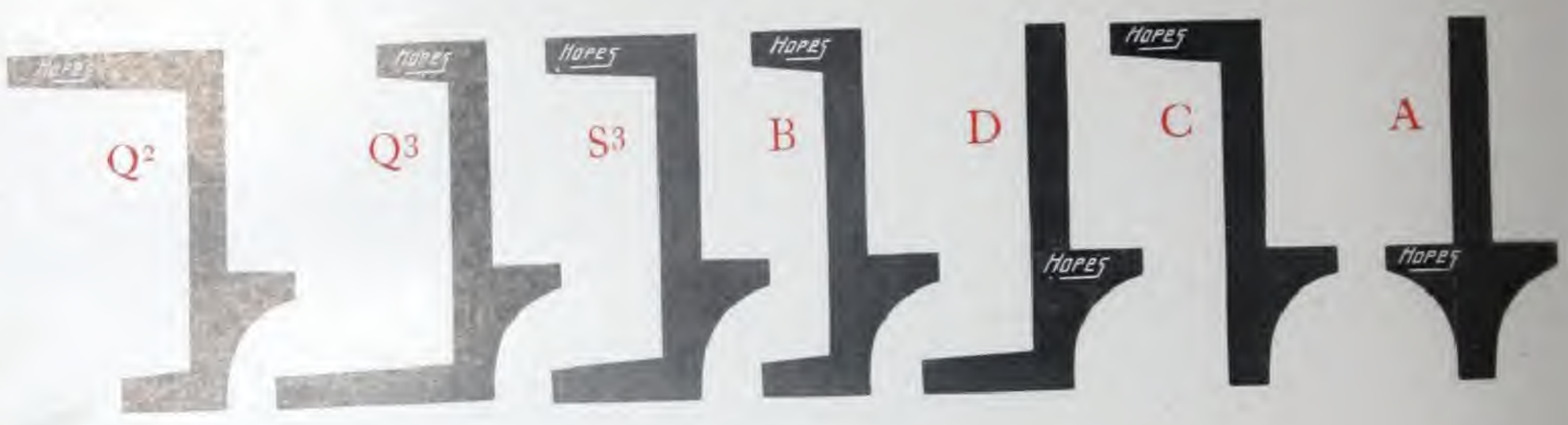
HOPE'S *Sash Sections*

Always in stock

All cleanly rolled from rolls kept for our exclusive use



2 in. Sections



1 5/8 in. Sections

1 1/2 in. Sections

1 1/4 in. Sections

1 1/2 in. Ovolo

We have also a large selection of L and ⊥ Sections for the construction of windows where FLAT surfaces are preferred.

ON the following pages we illustrate a number of Public Buildings, Banks, Colleges, Schools and Residences of all grades, in which Hope's Casements and Leaded Glass have been used.

ETON MEMORIAL — L. K. Hall & Sidney K. Greenslade, Architects

BRADFORD TOWN HALL

Norman Shaw, R.A. & F. E. P. Edwards, Associated Architects

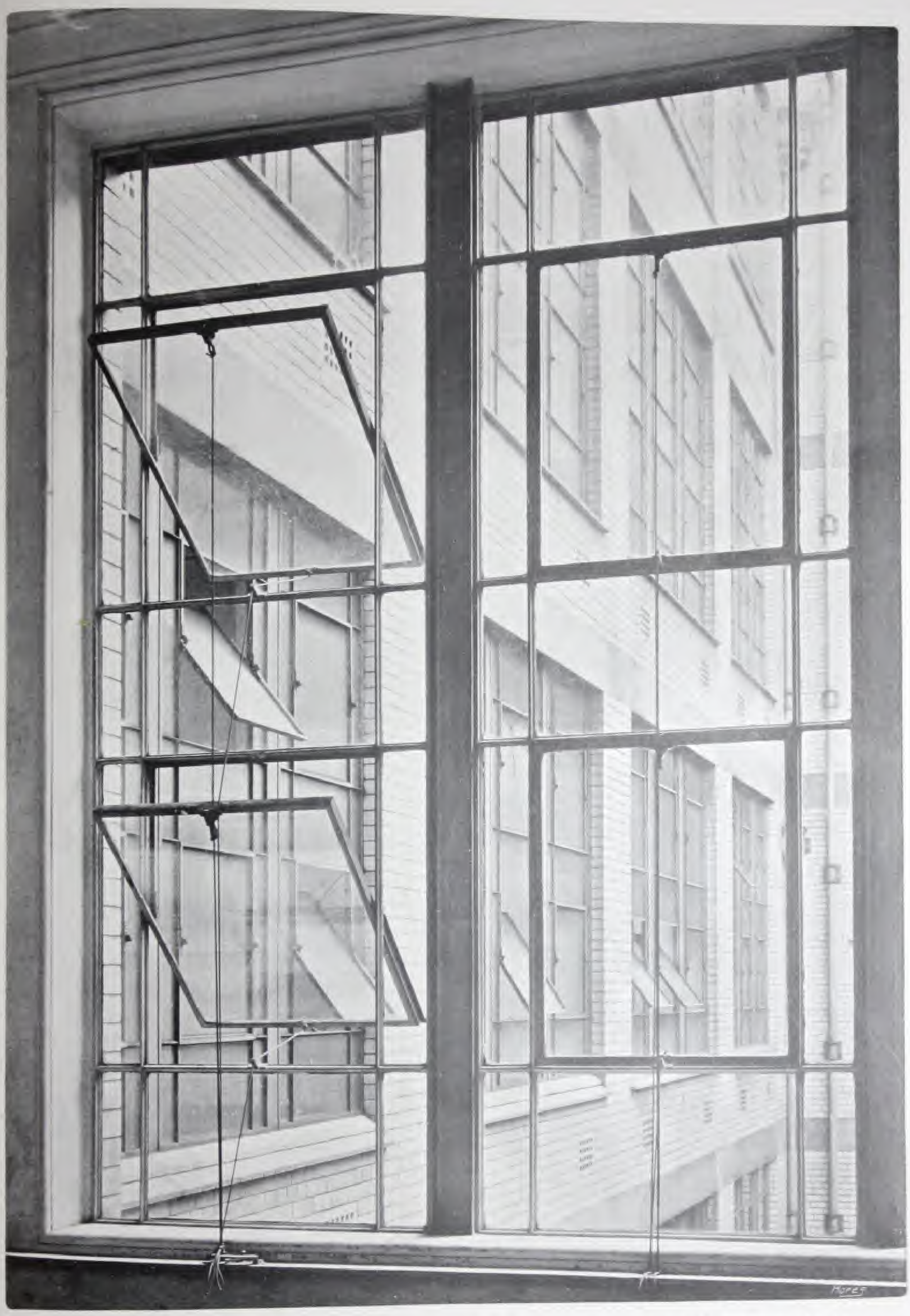
NOTE.—The casements and leaded glass in this building were supplied by Wenham & Waters Ltd., whose business we have purchased.

WESLEYAN METHODIST HALL, WESTMINSTER

H. V. Lanchester & E. A. Rickards, Architects

NOTE.—This was one of the incompleted contracts which we took over when we purchased the business of Wenham & Waters Ltd.

ROYAL LIVER BUILDINGS, LIVERPOOL W. Aubrey Thomas, Architect
(Over 5,000 Hope's casements and windows in this building).



One of the areas in the Royal Liver Building, lighted and ventilated with Hope's steel windows. Note the arrangement of opening ventilators, which turn right over for cleaning from inside.

CALICO PRINTERS' ASSOCIATION NEW OFFICES, MANCHESTER

Charles Clegg & Sons and Fryers & Penman, Joint Architects

(Over 4,000 Hope's casements and windows in this building).

One of several areas in the Calico Printers' Building, lighted and ventilated with Hope's steel windows and roofed at bottom with Hope's Patent Glass Roofing.

NOTE.—The casements are hinged at bottom and fitted with Hope's Patent Passable Side Arms, which allow of their being turned right back for cleaning.

NORTHERN ASSURANCE CO. NEW OFFICES, GLASGOW
John Archibald Campbell & A. D. Hislop, Architects

KODAK LTD. NEW OFFICES, KINGSWAY, LONDON
John James Burnet, LL.D., Architect

RENAULT LTD. NEW SHOW ROOMS & OFFICES, PALL MALL, LONDON
Boehmer & Gibbs, Architects

THE BRITISH MEDICAL ASSOCIATION, STRAND, LONDON

H. Percy Adams & Charles Holden, Architects

NOTE.—The casements and leaded glass were supplied by Wenham & Waters Ltd., whose business we have purchased.

BANK OF NEW SOUTH WALES, THREADNEEDLE STREET, LONDON
H. A. Pelly, Architect

THE UNION OF LONDON & SMITHS BANK, NUNEATON
Charles E. Bateman, Architect

UNION BANK, TORONTO

Darling & Pearson, Architects

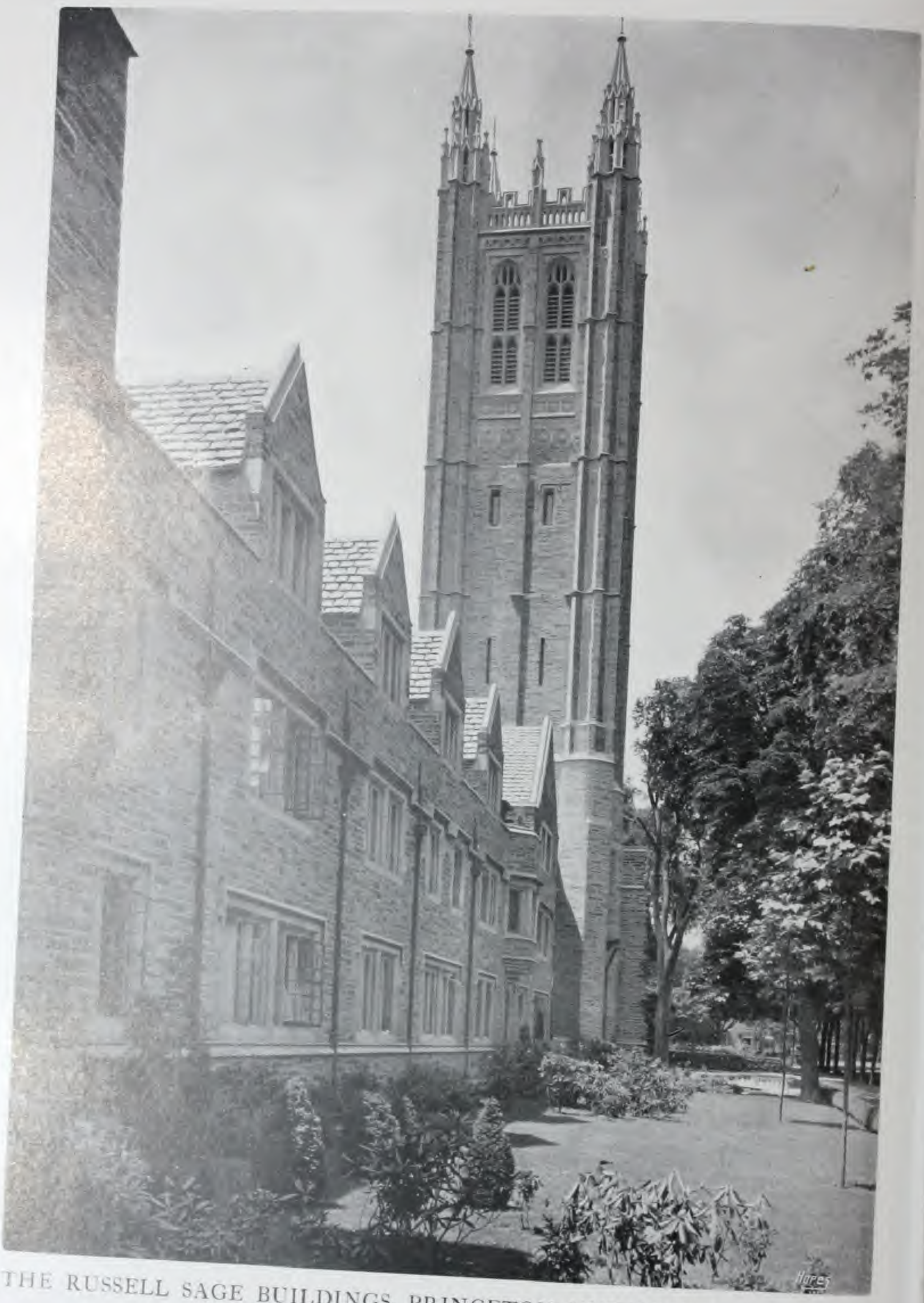
NOTE.—We have been awarded the contract for the solid bronze windows for the Bank of Toronto on the opposite corner.—Carrere & Hastings & Eustace G. Bird, Associated Architects.

CLIVE BUILDINGS, CALCUTTA

H. S. Goodhart-Rendel, Architect

ST. CUTHBERT'S CO-OPERATIVE SOCIETY, EDINBURGH

T. P. Marwick, Architect



THE RUSSELL SAGE BUILDINGS, PRINCETON UNIVERSITY, U.S.A.
Frank Miles Day & Brother, Architects

RUSSELL SAGE BUILDINGS, PRINCETON UNIVERSITY. (A view in the Court)

RUSSELL SAGE BUILDINGS, PRINCETON UNIVERSITY
(Another view in the Court)

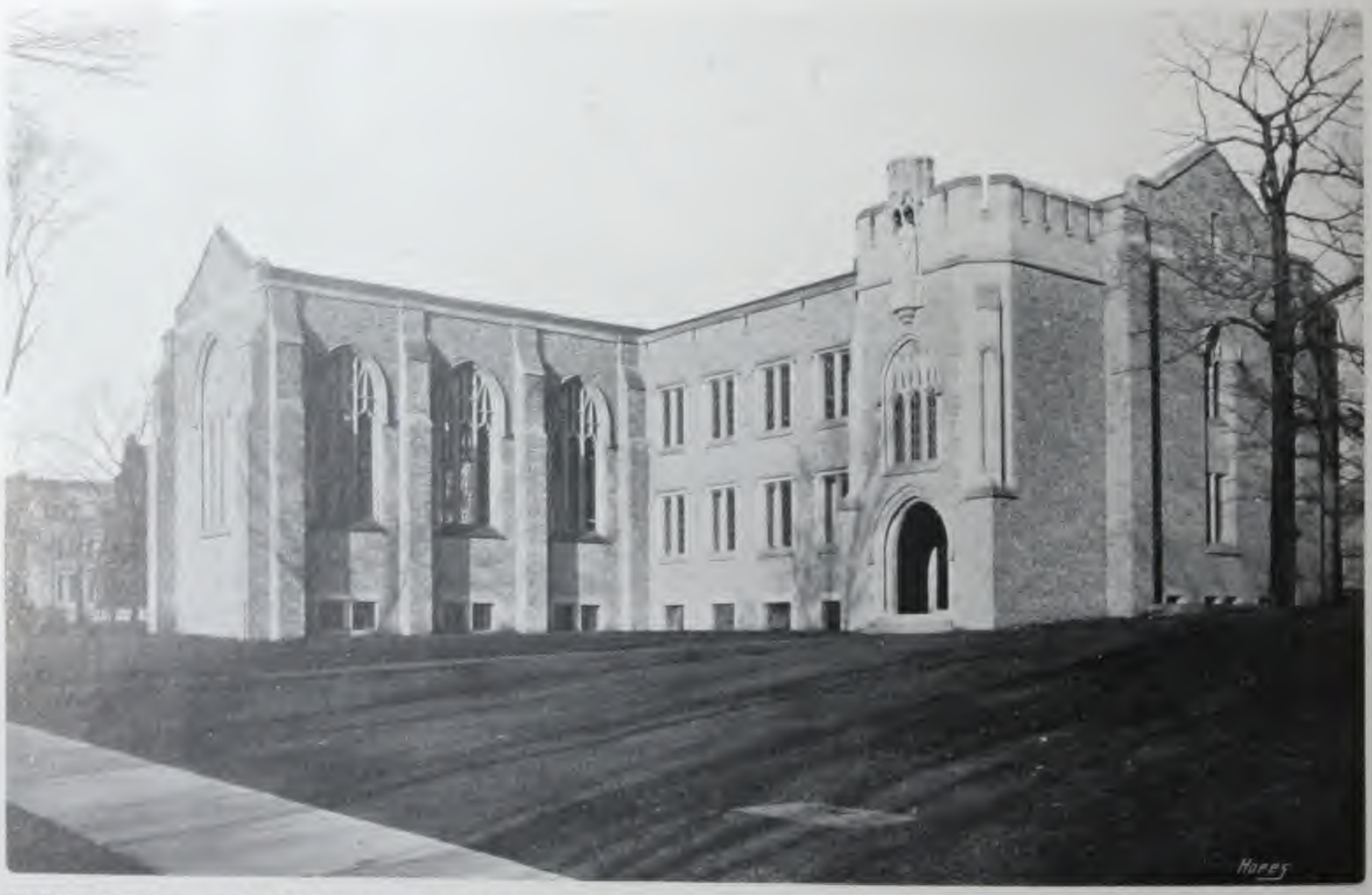
BIRMINGHAM UNIVERSITY — Sir Aston Webb, R.A. & E. Ingress Bell, Architects

AGRICULTURAL COLLEGE, CAMBRIDGE — Arnold Mitchell, Architect

McGILL UNIVERSITY, MONTREAL David R. Brown & Hugh Vallance, Architects

McGILL UNIVERSITY, MONTREAL (another view)

STUDENTS' UNION, SOUTH KENSINGTON — Sir Aston Webb, R.A., Architect



VICTORIA UNIVERSITY, TORONTO — Sproatt & Rolph, Architects

TRINITY COLLEGE, CAMBRIDGE

Grayson & Ould, Architects

MAGDALEN COLLEGE, CAMBRIDGE

Sir Aston Webb, R.A., & E. Ingress Bell, Architects

NEW GRAMMAR SCHOOL, HEXHAM-ON-TYNE

Oliver Leeson & Wood, Architects

COUNTY OFFICES, WINCHESTER

W. J. Taylor, Architect

NEW SECONDARY SCHOOL, BISHOP AUCKLAND

Edwin F. Reynolds, Architect

LONDON COUNTY COUNCIL CENTRAL SCHOOL OF ARTS & CRAFTS

W. E. Riley, Architect

NOTE.—The casements in this building were supplied by Wenham & Waters Ltd., whose business we have purchased.

SCHOOLS, ELAN VALLEY VILLAGE, RHAYADER
H. T. Buckland & E. Haywood-Farmer, Architects

COUNCIL SCHOOLS, LEIGH ROAD, BIRMINGHAM
H. T. Buckland & E. Haywood-Farmer, Architects

THE KING'S SANATORIUM, MIDHURST (Interior of Chapel)
H. Percy Adams, Architect

NOTE.—The casements and leaded glass at The King's Sanatorium were supplied by Wenham & Waters Ltd., whose business we have purchased.

BUNKER'S HILL, NORTH BERWICK — Sir Robert S. Lorimer, Architect

CARLKEMP, NORTH BERWICK — Kinross & Tarbolton, Architects

BRAKENBROUGH, CARLISLE

Sir Robert S. Lorimer, Architect

ROWALLAN CASTLE, AYRSHIRE

Sir Robert S. Lorimer, Architect

HEALE HOUSE, SALISBURY

Detmar Blow, Architect

BRATENAHL, CLEVELAND, U.S.A.

McKim, Mead & White, Architects

LODGES, CANFORD MANOR

H. S. Goodhart-Rendel, Architect

SOUTH WRAXALL MANOR. (Built in the 15th and 16th Centuries)
Casements and glass remade on the old models in 1908.

GREAT ROKE, WITLEY, SURREY

Herbert T. Buckland & E. Haywood-Farmer, Architects

GREAT ROKE, SURREY (another view)

SOUTHWOOD, TROON

Arnold Mitchell, Architect

WINTERBOURNE, EDGBASTON

John L. Ball, Architect

WESTBROOK, GODALMING

J. Thackeray Turner, Architect

TENNAL GRANGE, HARBORNE — Arthur Dixon, M.A., Architect

HALLYBURTON, COUPAR ANGUS — Sir Robert S. Lorimer, Architect

MAPPERTON HOUSE, BRIDPORT — Henry H. Hounsell, Architect

NEW BERWICK HOUSE, TISBURY — Detmar Blow, Architect

NEW BERWICK HOUSE, TISBURY (another view)

NEW BERWICK HOUSE, TISBURY (another view)

TIRLEY COURT, CHESHIRE — C. E. Mallows, Architect

"SHOTTENDANE," MARGATE — J. Thackeray Turner, Architect

Interior view of a solid bronze casement of Section 2, below transome, and a swinging casement of Section 14, above transome, set into stone. Fixed leaded lights glazed direct into grooves in stone.

"SHOTTENDANE," MARGATE

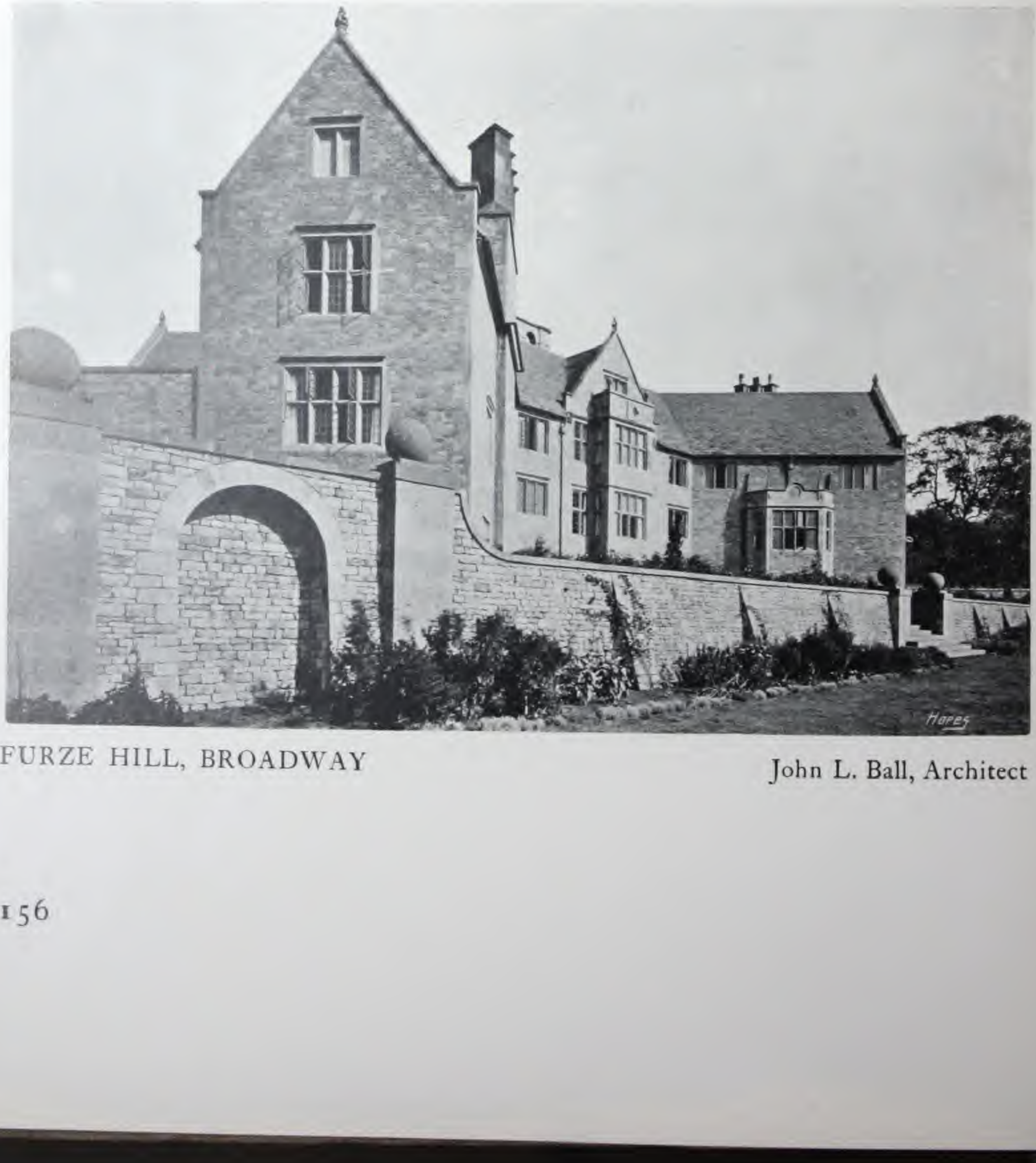
"SHOTTENDANE," MARGATE (another view)

LYMPNE CASTLE, KENT — Sir Robert S. Lorimer, Architect

LYMPNE CASTLE, KENT. (Laundry and Stables)

THE GREENWAY, SHURDINGTON, GLOS. Ernest Newton, Architect

NOTE.—The casements and leaded glass at The Greenway were supplied by Wenham & Waters Ltd., whose business we have purchased.



FURZE HILL, BROADWAY John L. Ball, Architect

Interior view of a casement and frame of Section 2, Quality 1, set in stone.
FURZE HILL, BROADWAY

LITTLE PEDNOR FARM, BUCKS

Forbes & Tate, Architects

STAPLEFIELD PLACE, SUSSEX

Clayton & Black, Architects

THE ORCHARD, SHANKILL, Co. DUBLIN — Batchelor & Hicks, Architects

PARKLANDS, RAHENY, Co. DUBLIN — Batchelor & Hicks, Architects

CANONS PARK, EDGWARE

C. E. Mallows, Architect

OLDCASTLE, DALLINGTON — Ernest Newton, Architect

LUCKLEY, WOKINGHAM — Ernest Newton, Architect

NOTE.—The casements and leaded glass at Oldcastle and Luckley were supplied by Wenham and Waters Ltd., whose business we have purchased.

ABER ARTRO, LLANBEDR, N. WALES — Charles E. Bateman, Architect

THE PILLARS, NORTHWOOD — Forbes & Tate, Architects

DOWNASH, TICEHURST

Walter Sarel, Architect

MEADWAY CLOSE, HAMPSTEAD GARDEN CITY, LONDON

Arnold Mitchell, Architect

JULIAN COTTAGE, HARROW

Arnold Mitchell, Architect

HOUSE AT MARGATE

Reeve & Reeve, Architects

ESLINGTON TERRACE, NEWCASTLE-ON-TYNE J. Newton Fatkin, Architect

GIDEA PARK, GARDEN CITY Forbes & Tate, Architects

ELAN VALLEY VILLAGE, BIRMINGHAM WATER SUPPLY
H. T. Buckland & E. Haywood-Farmer, Architects

COTTAGES AT BROXBOURNE
Forbes & Tate, Architects

COTTAGES, EAST CLANDON

H. S. Goodhart Rendel, Architect

TWO OF THE BUILDINGS IN THE ELAN VALLEY VILLAGE

THE GARDEN VILLAGE, HULL

Runton & Barry, Architects

NEW PRINTING FACTORY, BRUNSWICK STREET, LONDON
G. F. Collinson, Architect

NEW DOCKS & NAVAL WORKSHOPS, SIMONS TOWN
FOR H.M. GOVERNMENT

THE AMERICAN BANK NOTE CO., NEW YORK
(Over 50,000 square feet of 1⅜ in. steel sashes)

Kirby & Petit, Architects

TECHNICAL SCHOOLS, MONTREAL. (Interior of one of the workshops)

TECHNICAL SCHOOLS, MONTREAL
(1⅛ in. steel sashes)

John S. Archibald
M. Perrault
} Associated Architects

NEW CIVIL GENERAL HOSPITAL, RANGOON, FOR THE GOVERNMENT OF BURMA.

This photograph shews the projecting bay of one of the operating rooms.

HOPE'S
DOOR FURNITURE

WEDGE MORTISE LOCK 822. Registered No. 522240

The shape of this lock gives the following advantages :—

1. Time is saved in fixing.
2. The strength of the door is preserved, less being cut from the tenon of the lock rail than is necessary for a square cased lock.
3. Better fixing is provided for the furniture, at least 2 screws in each rose entering the solid wood.

850.

852.

895.

849.

624.

881.

883.

894.

Illustrations one-third full size.

Door Furniture—*continued*

900.

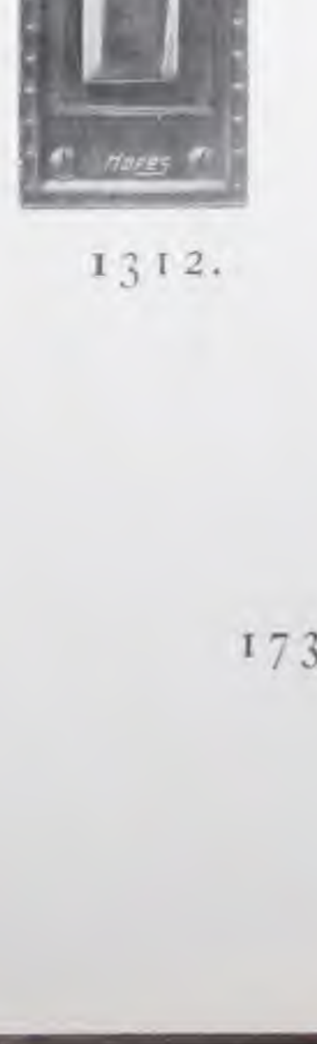
1074.

901.

985.

1404.

808.



1312.

1088.

Illustrations one-third full size.

New Catalogue of this department in preparation.

HOPE'S *Lead Work*

Head No. 684.

Head No. 667.

The Flèche illustrated on this page is constructed entirely of metal. The framework is of steel, and this is completely covered with cast lead. The work was executed in sections at our Birmingham works and erected in New York by our own men.

Lead Work—*continued*

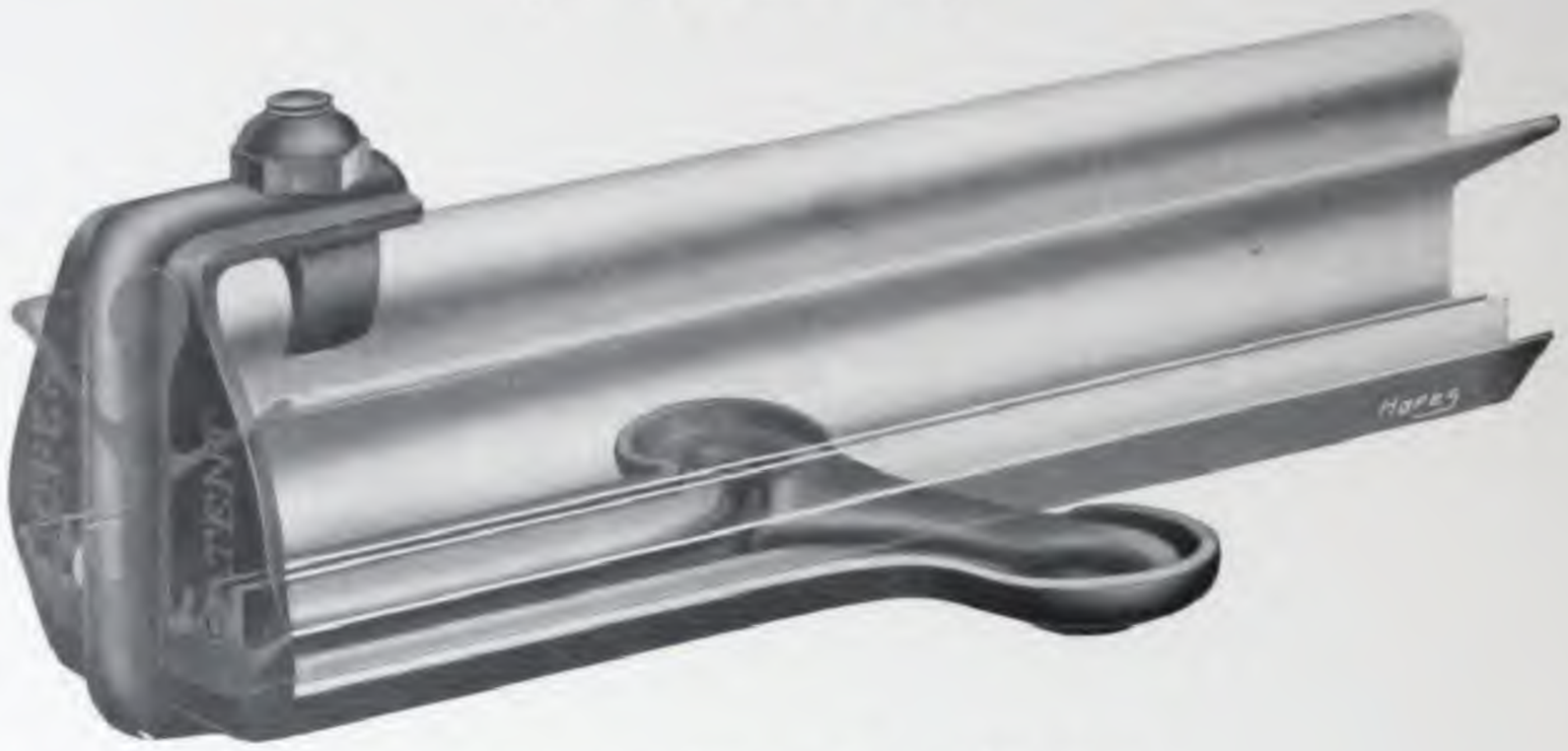
Cast-lead Sundial.

Head No. 682

Head No. 683

A comprehensive Catalogue of Cast Lead and Iron Rain Water Goods will be sent on application.

HOPE'S
GLASS ROOFING
(PATENT)



Full size view of Shoe. Patent No. 6264.

We illustrate on the opposite page full sized sections of our improved Glazing Bars. Our system of glazing is substantially the same as we have used without failure for the last fifteen years, such improvements as we have made being confined to matters of detail.

We guarantee that our system is permanent and watertight, and invite the attention of those interested to the following points:—

The glass has a good bearing on the bar, and is not supported on its extreme edges.

There is ample provision for expansion and contraction.

The form of the lead capping allows it to be turned up or down without an angular bend, so that broken squares can be easily replaced.

The capping cannot be cut by the edges of the glass.

Oiled asbestos cords are fixed as shewn, providing a plastic but imperishable seating material, and a perfectly dust-tight joint.

The bar has a solid bulb-shaped ridge projecting above the glass to carry planks if necessary, and to protect the glazing during repairs.

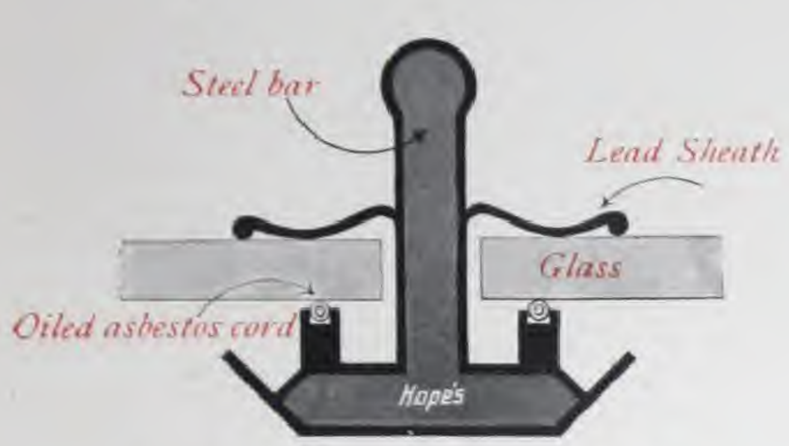
The steel bar is galvanized and covered with a jointless lead sheath, and no cutting or drilling is done to the bar after galvanizing.

The ends of the lead sheath are sealed.

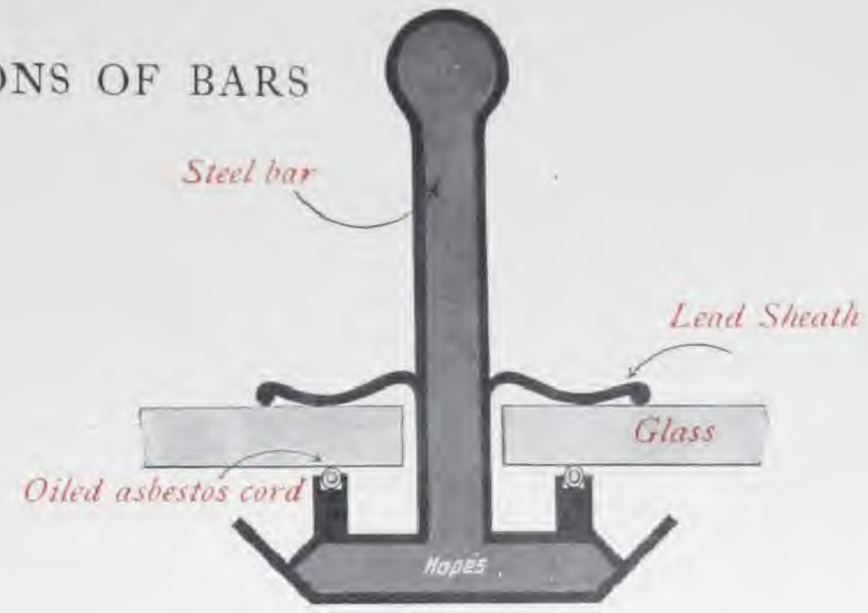
The fixing shoes are of solid copper and secured to the bars by our Patent System without perforating the lead cap.

Glass Roofing—*continued*

FULL SIZE SECTIONS OF BARS



Section B1 bar to carry 8 feet



Section O3 bar to carry 11 feet

Work recently executed for:

H.M. GOVERNMENT for the Admiralty, the War Office, & the Office of Works
The Imperial Japanese Government
The British Museum
Port of London Authority
London and North Western Railway
Great Western Railway
Midland Railway
London, Brighton and South Coast Railway
Calico Printers' Association
And many of the most important modern factories throughout Great Britain.

View shewing Hope's Glazing on the New Station at Birmingham for the Great Western Railway.

Complete Catalogue of Patent Glazing will be sent on application.

HOPE'S

Heating and Ventilation

Two views of the General Hospital, Rangoon, Burma.

The high standard of our work in this department is well known. We have a special and well organized staff of engineers, and are prepared at all times to advise and tender for Heating, Ventilating, and Hot Water Service for every description of building.

In addition to the ordinary systems of Heating, we are experienced in all the latest methods of Low Pressure Heating with small pipes. These systems give very great latitude in the method of installation, and it is no longer necessary to prepare a special boiler house in the basement, or to trench for pipes in order to feed radiators on the ground floor of the building. One of these systems is fitted up at our offices, and we shall be pleased to show and explain its merits at any time to architects.

A typical instance of our work on a large scale is furnished by the installation just completed for the Government of Burma at the New General Hospital, Rangoon, of which we give some illustrations on this page. The Compound is over a mile long, and a third of a mile wide; each block is supplied with hot water from the power house by a main 5,000 feet long; the water being heated by means of exhaust steam from electric light engines.

This contract included three Lancashire boilers, an Economizer (which effected a saving of 12% of the fuel consumption), duplicate high speed steam Alternators, Pumps, Condensers, Receivers, etc., and the whole of the work was executed under the personal supervision of one of our engineers.

Hauling a Lancashire Boiler into position at Rangoon.

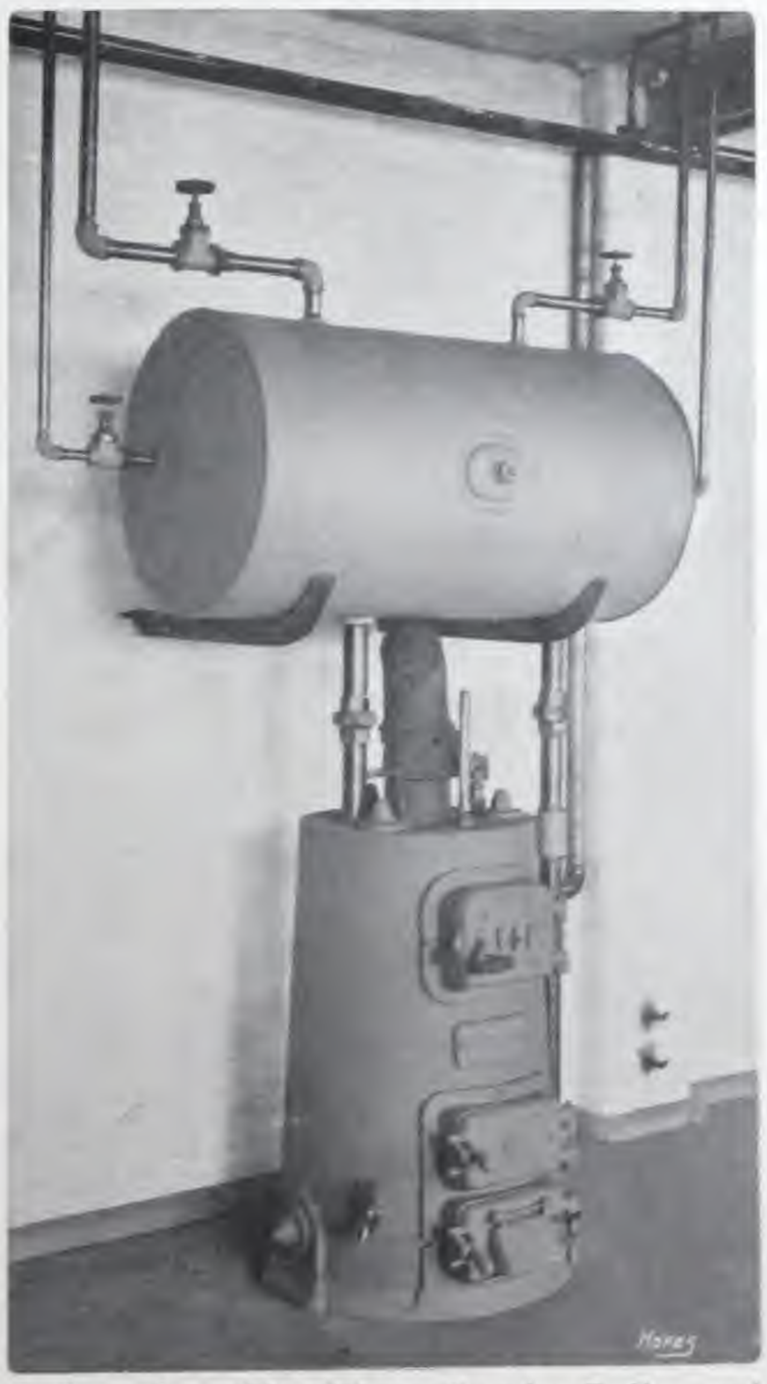
Hot Water Service

A continual supply of hot water is essential to the convenience and comfort of a modern residence and cannot be obtained economically by means of an ordinary Range Boiler.

With a self-contained Independent Boiler and properly designed apparatus, hot water *can be obtained immediately and at all times*, at an extremely low cost, due to the fire in this type of boiler being entirely surrounded by water and so utilizing a maximum amount of heat for the fuel consumed.

In view of the fact that the quality of water varies so considerably in different districts, individual treatment for each installation is necessary; entirely different types of boiler are required for soft and hard water, and a wrought-iron boiler, which may be satisfactory in one district, will be quite unsuitable for another. It is therefore apparent that to ensure the best results a competent firm of engineers should be employed.

We provide plans and estimates without charge and we guarantee the results.



Independent Hot Water Service Boiler and storage cylinder, shewing a compact arrangement of suitable design for residence work.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